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ABSTRACT

This study attempts to fill a gap in information about the effects of immigration in California and the policy trade-offs it engenders. The study provides an assessment of 30 years of immigration in California, home to one-third of the nation's immigrants, including a profile of the changing character of immigrants and their effect on the state's population, economy, and public sector. The focus is on aspects of immigration that are most amenable to quantitative analysis, such as immigrants' characteristics, contributions to the economy, effects on other workers, demand for public services, and educational and economic success of immigrants and their children. Although the characteristics of immigrants have changed over the past 30 years, California's economy continues to benefit from immigration. However, the magnitude of current flows and the high number of poorly educated immigrants, combined with changes in the state's economy, have increased the costs of immigration to the state's public sector and to some native-born workers. More immigrants, at 1.8 million, entered California in the 1970s than in all prior decades together, and that number nearly doubled again in the 1980s. If the current trends that result in so many poorly educated immigrants continue, there will be serious long-term issues for California. This is especially apparent in the area of education, for immigrant children lag behind others at present and may continue to do so. Current policies for California need to address two issues in particular: illegal immigration and the special relationship between the United States and Mexico. In addition, the federal government should help the state with the impact of immigration. (Contains 30 figures, 86 tables, and 161 references.) (SLD)

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Immigration in a Changing Economy

California's Experience

Center for Research on Immigration Policy
National Defense Research Institute

Kevin F. McCarthy
Georges Vernez

Prepared for the
Office of the Secretary of Defense, the California Business Roundtable,
The Ford Foundation, The William and Flora Hewlett Foundation,
the James Irvine Foundation, and The Andrew W. Mellon Foundation

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PREFACE

California's transformation into a diverse racial and ethnic society through immigration has attracted the attention of the rest of the country and of other parts of the Western world. The ambivalence many hold about the changes taking place in California is palpable not only within the state but in the country at large. The 1992 riots in Los Angeles, which involved African Americans and the newly arrived immigrants from Mexico, Central America, and Korea, were perceived by some as a natural outburst of the underlying tensions that the newcomers were creating. And when an unusually deep and long recession hit the state's economy in the early 1990s, some saw the backlash against immigration, symbolized by the passage of Proposition 187, as inevitable.

California is becoming a society where no one racial/ethnic group forms the majority. Hence, those who see California as a trendsetter for the rest of the nation are looking closely for clues about how such changes can best be managed. Others, perhaps less optimistic, are looking for clues about whether such a truly multi-ethnic society can indeed prosper and function peacefully.

We undertook this study (1) to promote a better understanding of the immigration phenomenon in California by assessing the effects it has had over the years on the state's demography, economy, people, and institutions and (2) to identify the present and future challenges immigration poses for California. In our findings, we hope, there are lessons to be drawn for other states, the nation, and even other countries.

Most past studies of immigration in California have looked at specific aspects of this phenomenon (such as Proposition 187 and other efforts to reduce illegal immigration through California's porous southern border) or have chronicled short-term events, e.g., the 1992 riots. Unlike these other studies, this volume takes a long-term view. It goes back to 1960, before the current era of large-scale immigration began, and looks systematically at how immigration has interacted with other demographic and economic trends over the subsequent decades to affect the state. It also examines how immigrants from different countries of origin are faring in their pursuit of the American dream. Finally, it identifies the challenges that California faces in integrating its newcomers and their children and how federal and state policies might maximize the benefits and minimize the costs of immigration in the future.

The project was sponsored by the Office of the Under Secretary of Defense for Personnel and Readiness, The Ford Foundation, The William and Flora Hewlett Foundation, the James Irvine Foundation, The Andrew W. Mellon Foundation, and by the California Business Roundtable. It partially fulfills a requirement in the 1995 Defense Authorization Act that the Department of Defense fund a study on the effects of defense downsizing and immigration on California.

This book synthesizes our analyses and findings with a minimum of technical details. Readers who are interested in exploring specific topics in greater detail should refer to the following companion reports:

Gray, Maryann Jacobi, Elizabeth Rolph, and Elan Melamid, *Immigration and Higher Education: Institutional Responses to Changing Demographics*, MR-751-AMF, Santa Monica, Calif.: RAND, 1996.

Schoeni, Robert F., Kevin F. McCarthy, and Georges Vernez, *The Mixed Economic Progress of Immigrants*, MR-763-IF/FF, Santa Monica, Calif.: RAND, 1996.

Vernez, Georges, and Allan Abrahamse, *How Immigrants Fare in U.S. Education*, MR-718-AMF, Santa Monica, Calif.: RAND, 1996.

Vernez, Georges, and Kevin F. McCarthy, *The Costs of Immigration to Taxpayers: Analytical and Policy Issues*, MR-705-FF/IF, Santa Monica, Calif.: RAND, 1996.

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SUMMARY

PURPOSE

Immigration, the subject of repeated policy debates throughout the last two decades, has once again assumed a central position on the policy agenda. Nowhere is this debate more intense than in California, home to one-third of the nation's immigrants and to a referendum that helped to trigger the current policy debate. Although much has been written about immigration and its economic, social, and political effects, most of this material has focused on advocacy of specific points of view rather than on a nonpartisan assessment of the issue and the policy trade-offs it engenders.

This study attempts to fill this information gap by providing an objective assessment of the past 30 years of immigration to California, including a profile of the changing character of the immigrants and their effects on the state's population, economy, and public sector. Our goal is to promote a better understanding of the immigration phenomenon, the trade-offs it entails, and the present and future challenges that it poses for California.

Our study focuses on those aspects of immigration that are most amenable to quantitative analysis, such as the immigrants' characteristics, their contribution to the economy, their effects on other workers, their demand for public services, and their educational and economic success and that of their offspring. We recognize that this focus gives inadequate attention to the less tangible social, cultural, and emotional dimensions of immigration, which also play an important role in shaping the public's attitudes. However, we hope that by studying empirically based measures, we can provide a basis for recasting the policy debate.

KEY FINDINGS

Our major conclusions can be summarized as follows. Although the characteristics of immigrants have changed over the past three decades, the state's economy continues to benefit from immigration. However, the magnitude of current flows—and the flows' disproportionate share of poorly educated immigrants—combined with ongoing changes in the state's economy has increased the costs of immigration to the state's public sector and to some native-born workers. The state faces a growing challenge as it attempts to integrate these new immigrants while also trying to promote the welfare of the state and all its residents.

The number of immigrants entering the state has been increasing at unprecedented rates: More immigrants—1.8 million—entered the state during the 1970s than in all prior decades together. And that number nearly doubled again, to 3.5 million, during the 1980s. Immigrants have continued to come at these high rates during the 1990s despite a recession that was the state's most severe since the Great Depression. As a result, immigrants now constitute in excess of one-quarter of California's residents and workers and are now responsible for more than half of the state's population and labor force growth.

The profile of these recent immigrants is more diverse ethnically, socio-demographically, and economically than in the past. California has more of more different types of immigrants than ever before. Also its immigrants differ significantly from those in the rest of the country. Today, about 50 percent of California's foreign-born residents are from Mexico or Central America and another 33 percent are from Asia, compared with 23 and 21 percent, respectively, in the rest of the country. California's immigrants are also much more likely to be illegal, newly legalized, or refugees than are immigrants elsewhere in the country. And although immigrants at all levels of education have entered the state, there has been a steady decline in the average educational level of immigrants relative to native-born workers—a pattern that is not found in the rest of the country.

To a much greater extent than in the past, the rate at which immigrants and their children succeed economically and socially depends directly on their education. Highly educated immigrants—about half of the state's total—reach economic parity with native-born residents within their lifetimes. The other half—those with extremely low levels of education who are primarily from Mexico and Central America—command low earnings and make little economic progress in their lifetimes. This raises serious concerns about whether and, if so, when their children will reach parity with other groups.

California's employers, and its economy more generally, have been the primary beneficiaries of this recent immigration. To employers, immigrants are cheaper but equally as productive as native-born workers across all levels of education from high school dropouts to college graduates. This comparative labor cost advantage helped the state's economy grow more rapidly than that of the rest of the nation from 1960 to 1990. Although the state suffered a long and deep recession from 1990 to 1994, immigration has continued unabated. Currently, California's employment growth is once again exceeding that of the rest of the nation.

The economic benefits of immigration have not been without some costs. The high concentration of refugees and other low-income immigrants who are high users of public services has impacted the state fiscally. So have a growing number of elderly immigrants, who—without pensions and ineligible for Social Security—have sought Supplemental Security Income and MediCal, which are partially funded by the state. Finally, with an age structure conducive to childbearing and high fertility rates, immigrants have been a major contributor to the rapid increase in primary and middle school enrollments, which have placed an additional burden on the state's resources. This effect will eventually be felt throughout the state's educational system.

A declining demand for low-skill workers combined with a continuing influx of low-skill immigrants has increased competition for low-skill jobs within the state and has hurt the earnings of some low-skill workers. It has also contributed to a growing disparity between the wages of foreign- and native-born workers. These effects vary across racial/ethnic groups and have been sensitive to changing economic conditions—having mostly affected the earnings of low-skill workers in the 1970s and the job opportunities of a smaller share of native-born workers in the 1980s. We estimate that overall, between 1 and 1.5 percent of the adult native-born population has left the labor force or become unemployed because of immigration. In addition, immigration has played a role in the dropoff of net migration to California from other states.

Looking to the future, long-term economic and immigration trends appear to be headed in opposite directions. The state's economy, for example, has been changing in several ways—albeit mostly independently of immigration. First, the rate of employment growth began declining from its 1970 peak even before the employment losses of the early 1990s and, while now recovering, is not projected to regain the rapid pace of the 1970–1990 period. Second, consistent with the shift in the state's economy away from manufacturing and toward higher-skill service and technology industries, employers have been placing a higher premium on a highly educated workforce. Eighty-five percent of the new jobs added to the state's economy between 1970 and 1990 were filled by workers with at least some post-secondary training. Third, there has been an increasing divergence between the economic fortunes of California's well-educated workers and the less educated, who now have to compete for fewer low-paying jobs and face the prospects of little career earnings growth. Finally, in recent years the state has found itself facing repeated fiscal crises as various measures, beginning with Proposition 13, have limited the funds available to state and local government treasuries and restricted the way governments can spend those funds.

The pace of immigration, however, increased throughout the 1970–1990 period and has not slowed much, if at all, since 1990. Moreover, close to half of the most recent immigrants have educational attainment well below that of the native-born population.

In sum, there appears to be a growing divergence between current trends in the state's economy and immigration policies that are producing a steady inflow of poorly educated immigrants. If these trends continue, they are certain to raise a number of long-term issues for California.

- The earnings of poorly educated immigrants are deteriorating relative both to native-born workers and to earlier immigrants and are likely to remain low throughout their working lives. What can and should the state do to improve the labor market prospect of these low-skill workers?

- Because the educational attainment of children depends in part on the earnings and education of their parents, the children of today's poorly educated immigrants lag behind the state's other residents in educational attainment. If this trend continues, it will affect both the second generation's economic fortunes and, because immigrants and their children constitute an increasing share of new labor force entrants, the long-term productivity of the state's economy. How can the state increase the educational attainment of the children of these low-skill immigrants?
- Immigration is increasing the demand for public services. The low incomes and large family sizes of recent immigrants have increased their demand for public services without increasing their tax payments. In addition, an increasing number of immigrants are reaching retirement age without access to Social Security and Medicare benefits. In addition, education is the public service most affected by immigration. Immigrants account for half of the recent growth of K–12 enrollments, and their full effects on the postsecondary system have yet to be felt. By the year 2005, the cohorts of students in high schools will be between 25 and 40 percent larger than current ones. How will the state respond to this demand and how will it be financed?
- Immigration has been a contributor, albeit not the primary factor, in increasing the earnings disparities between immigrants and native-born residents and between racial and ethnic groups in the state. What can the state do to ameliorate or reverse this trend?
- Immigration has been reducing the traditional advantages that California's economy has enjoyed relative to the rest of the country. This trend is manifest in a reduction of the educational advantage California's workers have held over workers nationwide and in a decline in the productivity advantage California continues to enjoy over other states. How can the state's economy regain its advantages over the rest of the nation to ensure its continued economic growth?

- Finally, the state's economy is generating no new jobs for high school dropouts and few for those with only a high school diploma. Over the past 35 years, poorly educated immigrants have essentially been backfilling jobs as they have been vacated by native-born workers who retire, move up the occupational ladder, or move to other states. Currently, younger immigrants already hold more than 60 percent of these jobs and there will be increasingly fewer of these jobs available for new poorly educated immigrants. How will the state's economy respond to this situation and the increasing low-skill-job competition between its poorly educated foreign- and native-born workers?

RECOMMENDATIONS

The federal government has direct responsibility for setting the nation's immigration policies. However, the current approach, which relies on a fixed set of regulations, quotas, and preferences that are applied to all circumstances, is no longer responsive to today's dynamic economic and social environment. Rather, the goals of federal immigration policy should be to regulate the volume and composition of immigration so that its benefits are maximized, while its adverse effects are minimized. Specifically, we recommend that current policies be modified to allow easier and more frequent changes to immigration quotas and entry criteria, to maintain moderate overall immigration levels over the long term, and to place greater emphasis on the educational levels of new immigrants.

Moreover, we believe that current policies must explicitly deal with two special issues: illegal immigration and the special relationship between the United States and Mexico. Despite the current public mood favoring a more rigorous approach to illegal immigration, enforcement of existing laws has too often fluctuated depending upon the perceptions of the benefits of illegal immigration. However, a full accounting of the costs of illegal immigration is probably impossible and focusing on its costs and benefits ignores the key point: The issue of illegal immigration is preeminently a question of values, not effects.

Immigration from Mexico is clearly a special case. Mexico is California's neighbor, provides almost half of California's immigrants, and is the primary source of the state's illegal immigrants. In addition, both California and the United States more generally have a wide range of economic, environmental, social, family, and political interests in common with Mexico. Correspondingly, the issue of Mexican immigration, including illegal immigration, cannot be divorced from the broader context of U.S.–Mexican relations; instead, both countries should expand bilateral cooperation on immigration issues.

Regardless of the policies developed to deal with future immigration, California must realize that those immigrants who are already here constitute about one-quarter of its existing population, and they and their children are responsible for approximately two-thirds of the state's population growth. As a result, their experiences will go a long way toward determining the state's immediate future. Correspondingly, both the federal and state governments should develop more proactive policies regarding the integration of immigrants. The single most important determinant of immigrants' success in today's economy is education. Therefore, the state must ensure equality of educational opportunity through college for its existing immigrants and their children. It must make special efforts to encourage high school graduation and college attendance for Mexican and Central American immigrants and their children since these two groups comprise half the state's immigrants and they are currently lagging in educational attainment. Moreover, the state, in coordination with the federal government, should consider sponsoring programs to encourage naturalization and to expedite the English proficiency of immigrants already here.

Finally, although immigration is preeminently a federal responsibility, there is little question that the states where immigrants concentrate feel the impacts of federal policies most directly. Thus, the federal government should be willing to consider ways to alleviate the costs its immigration policies can impose on those states and their local governments.

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Chapter One

INTRODUCTION

Immigration, the subject of repeated policy debates throughout the nation's history, has once again assumed a central role on the policy agenda. Nowhere has this debate been more intense than in California, home to one-third of the nation's immigrants and to a referendum that helped trigger the current policy debate. Although much has been written recently about immigration and its economic, social, and political effects, most of this material either has focused on a particular aspect of immigration (e.g., its effects on public spending or the characteristics of a particular ethnic community) or advocates a specific policy point of view. The most comprehensive studies of immigration in California (McCarthy and Valdez, 1986, and Mueller and Espenshade, 1985) were conducted more than 10 years ago. As a result, there is a gap in the information available about what has been happening in California since that time.

This study attempts to fill this information gap by providing an objective assessment not only of the last 10 years but also of the past 35 years of immigration to California, including a profile of the changing characteristics of the immigrants and their effects on the state's people, economy, and public sector. Our goal is to promote a more comprehensive understanding of the immigration phenomenon, the trade-offs it involves, and the present and future challenges that it poses for California.

In this Introduction, we briefly review the factors that have given rise to the current debate about immigration, and most particularly illegal immigration. We then outline the purpose of our study, its approach, and its limitations.

THE CHANGING PUBLIC DEBATE ABOUT IMMIGRATION

The current debate about immigration has its genesis in two diverging secular trends: first, a steady increase over the past three decades in the annual number of new legal and illegal immigrants, and second, changes in California's economy and public sector.

Immigration was moderate, by historical standards, during the 1930s–1950s, but immigration to California and the United States began to increase anew in the 1960s as a result of two major changes in federal immigration law.[1] In 1964, Congress terminated the agricultural guest worker ("Bracero") program. The result was the conversion of a predominately legal and seasonal flow of Mexican immigrants into a predominately illegal, permanent flow. In 1965, Congress also passed a new Immigration and Naturalization Act that increased the number of immigrants allowed to enter, abolished the national-origin quotas favoring European immigrants, opened the door to immigration from Asia and eventually Latin America, and greatly expanded entry by family members. These changes were followed in the 1970s and 1980s by an inflow of refugees from cold war trouble spots, and in 1986, by the legalization of 2.6 million undocumented immigrants nationwide through the amnesty provisions of the Immigration Reform and Control Act (IRCA).

In combination, these events have changed the pattern of immigration to California in four very important ways. First, the actual number of foreign-born residents of California increased substantially. Between 1970 and 1980, the number of immigrants doubled and then doubled again during the 1980s. By 1990, 6.5 million residents of California, or one out of every four residents were foreign born. Second, the national origins of the immigrant population changed dramatically. During the 1950s almost half of California's new immigrants came from Europe with another third from Mexico. By the 1980s, fewer than 10 percent of the state's new foreign-born residents were of European heritage, while slightly over half were from

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[1] For a detailed review of changes in immigration policies since 1965, see Rolph (1992).

Mexico or Central America. Most strikingly, Asians made up about 10 percent of the state's earlier immigrants, but they now constitute close to 40 percent of the total. Third, the educational levels of recent immigrants, although higher than their predecessors, declined sharply relative to native-born residents. Close to half of California's recent immigrants, for example, entered with less than a high school education, compared with only 15 percent of native-born residents. Fourth, California's immigrants became increasingly concentrated in Southern California and in Los Angeles County, in particular. Indeed, between 1960 and 1990, immigrants increased their share of Los Angeles County's residents from one in eleven to one in three.

In brief, by 1990, immigrants had come to play a dominant role in California, contributing two-thirds of the growth in the state's population and labor force, and were rapidly transforming the state into a multi-ethnic society of unprecedented diversity.

Since 1990, these trends have continued. The number of immigrants to the state, for example, has increased by over 1.5 million (California Department of Finance, 1996a)—approximately the same pace as during the 1980s. The diversity of California's immigrants has also increased as the fraction of new immigrants coming from Asia and Europe (primarily from countries of the former Soviet Union) has risen slightly at the expense of the fraction of immigrants from Mexico and Central America (California Department of Finance, 1995). Although one-third more of these new arrivals have at least a college degree than do the immigrants who entered before 1990 (U.S. Department of Commerce, 1995),[2] as a group they are still four times more likely to lack a high school diploma than the state's native-born residents (Martindale, 1996). In addition, over 70 percent of the state's most recent immigrants have settled in Southern California and fully 65 percent in the five-county Los Angeles region (California Department of Finance, 1996b).

By and large, California has welcomed its newcomers. They were perceived as willing to do jobs that native-born residents would not, and to provide labor to whole industries, such as agriculture and ap-

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[2] Of the population 25 and over, 28 percent of the immigrants arriving in California during the 1990s had at least a college degree compared with 20 percent for all immigrants in the state.

parel, that it was feared would not flourish without them. They also were believed to improve the well-being of a large segment of California's population by reducing the costs of a wide range of household, entertainment, and food services. Latent concerns about potential labor shortages in a growing California (and national) economy appeared to supersede a growing concern about increasing numbers of illegal immigrants working and residing here.

This ambivalence is well illustrated by California's congressional delegation stand on the Immigration Reform and Control Act of 1986. The state's delegation supported the bill's crackdown on illegal immigration but wanted it paired with amnesty for illegal immigrants already in the country, including those employed as seasonal agricultural workers. These provisions resulted in the legalization of more than 1.5 million illegal immigrants in California. Similarly, the California delegation supported the passage of the Immigration Act of 1990, which greatly expanded the annual number of visas for permanent legal immigrants (Rolph, 1992) and thereby assured that the number of immigrants entering the country throughout the 1990s would rise to the highest levels since the turn of the century.

As the volume of immigrants increased and their characteristics changed, the economy of the state was also changing, although for reasons mostly independent of immigration.[3] The state's industrial base was being restructured away from its traditional manufacturing base toward higher-skill service and high-technology industries. At the same time, employers were placing a greater premium on an educated labor force. The result was a stagnation in the number of jobs available for the growing number of people without some postsecondary education: 85 percent of the net new jobs created between 1970 and 1990 by the California economy were filled by workers with some postsecondary training. These trends also led to an increasing divergence between the economic fortunes of California's well-educated workforce and its less-well-educated workers—who now have to compete for a stable pool of jobs and face the prospect of little career-earnings growth.

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[3] These economic changes were mostly triggered by a combination of international and national economic trends.

The overall growth in jobs has also slowed steadily since the early 1980s. For example, while total employment grew by 42 percent during the 1970s, it grew by a little less than one-third in the 1980s, and actually contracted during the 1990s recession—the worst since the 1930s. Indeed, during the recession the state lost around 150,000 jobs annually, in contrast to an annual addition of 300,000 jobs during the 1980s. Although the state's economy has rebounded since mid-1994, the rate of new job creation has still not reached the levels of the 1980s—yet the structural shifts in the economy are continuing.

In addition, Californians, who had formerly supported an ambitious program of public investment that enabled the state to build an education, water, transportation, and social support infrastructure second to none in the nation, began to reduce their support for public spending. Responding to a rapid price escalation in the California housing market, in 1978 they overwhelmingly approved Proposition 13, which rolled back property tax levels and limited the rate at which they could increase in the future. Proposition 13 was then followed by a series of initiative and legislative measures, including the enactment of spending limits, budget earmarking for categorical spending, and a variety of state and federal mandates, designed to reduce or control public spending. In combination, these measures have limited the funds available to state and local governments and restricted the way they can be spent. As a result, governments now have fewer resources to respond to public needs and to fluctuations in the economy. This situation culminated in an actual cutback of state services during the 1990 recession, when state revenues began to decline in absolute terms.

Prompted by these long-term trends, but triggered by the worst recession to hit the state since the depression, public concern shifted to immigrants and the costs they impose on the state's public sector. Initially this concern focused on illegal immigration, culminating in the decisive approval in November 1994 of Proposition 187 (by a 59 to 41 percent margin), which sought to sharply limit the public benefits available to illegal immigrants. Subsequently, the focus widened at both the state and federal level to the costs and benefits of legal immigration as well. For example, in 1994, the bipartisan National Commission on Immigration Reform proposed to reduce legal immigration to its 1980s levels and to limit family reunification to immediate family members. And just last year, Congress passed and the president signed two laws that sent decidedly negative messages to immigrants: the first, the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), provides additional resources and flexibility to the Immigration and Naturalization Service (INS) to deter illegal immigration; the second, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, denies access to a broad range of federal and state social support programs to legal immigrants who have not yet become citizens.

Underlying these legislative efforts are a broad set of recurring questions about the effects of immigration:

- Are current immigrant flows too large, too concentrated, and too different from their predecessors to be "absorbed" by the impacted states and localities?
- Do immigrants face more difficult obstacles to upward mobility and full integration into American society today than in previous times?
- Do today's immigrants with low levels of education still benefit an economy that increasingly demands a college-educated labor force?
- Are immigrants increasingly undercutting the economic position of native-born, as well as earlier immigrant, workers by reducing their job opportunities and earnings?
- Do immigrants impose a burden on the public sector because the cost of their service usage exceeds their contribution to public revenues?

PURPOSE OF STUDY

This study addresses the above questions. It is designed to accomplish two major goals:

1. To identify and quantify the effects of 35 years of sustained immigration on California's population, its economy, and its public and private institutions.
2. To explore the challenges that immigration poses for California and to recommend various federal and state-level actions that can

maximize the benefits and minimize the costs that immigration may impose.

APPROACH

This study has several distinctive features: First, it focuses on the state of California rather than the nation as a whole. Since immigrants tend to concentrate in selected geographic areas, their effects will likewise be felt unevenly. Moreover, one-third of the nation's immigrants are located in California so that a state-level analysis of immigration is particularly appropriate. Second, this study considers the broad range of concerns about the effects of immigration rather than focusing on a single issue. Although at least two prior studies have a similar comprehensive focus (see McCarthy and Valdez, 1986, and Mueller and Espenshade, 1985), those studies are already more than a decade old. Third, this study recognizes the diversity of California's immigrants (rather than treating them as a monolithic group) and examines their effects over a 35-year period—1960 to 1995—rather than over a single decade, as is more typically the case. Fourth, it has benefited from the active involvement and suggestions of a diverse advisory committee of community leaders with widely different views of immigration.[4]

Throughout this study, we distinguish among immigrants along a number of dimensions. To begin, we distinguish among immigrants by region of origin. The categories we use are designed to capture differences among groups in term of their region of origin and their socio-demographic and economic characteristics. Specifically, we distinguish between immigrants from (1) Europe and Canada; (2) four regions of Asia—China, Japan, and Korea; the Philippines; Indochina; and the rest of Asia; (3) two groups of Hispanics—Mexicans and Central Americans; and (4) all other immigrants. In addition, we frequently sort immigrants by educational attainment: less than 12 years, 12 years, 13–15 years; college graduates. This distinction is particularly important to an understanding of the economic position of immigrants.

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[4] The members of the advisory committee are listed in Appendix A. They met six times over the two-year duration of this study.

To the extent possible, we also sort immigrants by their legal status at entry: e.g., refugees, legal immigrants, and illegal immigrants. However, comprehensive data on legal status are not widely available and this constrains the kinds of comparisons we can make along this dimension.

This study is the first to focus on the effects of immigration over the long term—a 30-year period. We believe that doing so is important for two reasons. First, what may be a relatively small number of newcomers in any given year, or even 10 years, may become increasingly significant over longer periods. Second, the effects of immigration may change over time, depending on cumulative numbers, economic conditions, and other factors. Also, the short-term effects may differ from long-term effects.

Finally, the study relies primarily on data from the decennial Censuses.[5] However, we have also utilized data from a variety of other sources that address the specific issue at hand. Finally, we employ a variety of analytical techniques in our analysis—including time series and multivariate techniques—as is appropriate to the issues we address and the data we employ. When necessary, the special features of these techniques are described in the appropriate chapters.

LIMITATIONS

Despite its strengths, the study also has several limitations. First, many of the phenomena we analyze are complex, depending upon the interaction over time of a variety of economic, social, political, institutional, and policy factors. Sorting out the unique effects of immigration on these phenomena is not always possible. For example, we cannot observe adjustments that the economy might have made in the absence of immigration, just as we cannot determine what labor market outcomes individuals might have experienced at different levels of immigration. Thus, we are not always able to disentangle cause and effect in the relationship between immigration and other phenomena.

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[5] We employ data from the *Public Use Sample* from 1960, 1970, 1980, and 1990 (U.S. Department of Commerce, 1960, 1970, 1980, and 1990).

Second, we emphasize behaviors that lend themselves to empirical measurement, using a broad range of socio-economic individual and aggregate indicators. While this focus is appropriate given our emphasis on providing information useful to guide public policymaking, it does not cover all the relevant dimensions of immigration. We have not, for example, attempted to quantify the effects immigration may have had on the linguistic, cultural, or religious aspects of American life. In the United States, these dimensions are typically considered to belong to the private, rather than the public, domain.

Third, one of the main goals of our analysis is to enhance understanding of the complexity of immigration issues and the trade-offs they entail. While we can identify the nature and consequences of such trade-offs, we recognize that the choice among alternatives often comes down to value judgments, e.g., how much emphasis to place on the economic versus the humanitarian effects of immigration policy. Nowhere is the question of values more central than in the question of illegal immigration. The value that society places on "respect for the rule of law" may make illegal immigration undesirable regardless of its economic effects. Indeed, we believe that the issue of illegal immigration is as much a question of values as of effects.

Fourth, this study faced two major limitations of data availability. To begin, we lacked reliable data on immigrants' legal status. Hence we were constrained in our ability to distinguish reliably between the characteristics of legal and illegal immigrants—an issue that has been at the center of much of the immigration debate. We have, however, used available data to estimate some of these differences. In addition, our analysis of the fiscal costs of immigration was severely constrained by a lack of information on both immigrants' use of services and their contribution to public revenues. Until such data are collected, answers to questions about the effects of illegal immigration and the net fiscal costs of immigration must remain approximate at best.

Finally, our analysis is more detailed for the 1960–1990 than the post-1990 period. To the extent possible, we have extended our analysis to the present—a particularly important period in California since the recession that began in late 1990 marked a dramatic contrast with the rapid growth of the prior decades. However, the data available for the post-1990 period are more limited in scope than for the earlier decades.

ORGANIZATION OF THE REPORT

The remainder of this report is divided into 10 chapters. Chapter Two summarizes the history of immigration in California and how recent patterns diverge from both national and prior California patterns. Chapter Three then presents a socio-economic profile of the state's foreign-born residents. Chapter Four assesses the demographic effects of immigration. Chapter Five then shifts to an examination of the economic and educational progress immigrants are making over their lifetime as well as the progress made by their native-born children. The three subsequent chapters focus in some detail the role immigrants play in the economy. Chapter Six describes how new immigrants in the labor force are different from their native-born counterparts in terms of both education and costs to employers. Chapter Seven examines in some detail the changing role immigrants play in the state's economy. The benefits that immigrants are providing to the state's economy are assessed in Chapter Eight. Chapter Nine looks specifically at immigrants' effects on native-born workers. Chapter Ten focuses on immigrants' effects on demand for California's public services. Finally, Chapter Eleven summarizes our key findings and discusses their implications for policy at the federal and state levels.

Chapter Two

THE CHANGING CHARACTER OF RECENT IMMIGRATION TO CALIFORNIA

California's attraction to immigrants is nothing new. Indeed, the first settlers to join the American Indians in California came not from Western Europe or the United States but from Mexico and Russia. The legacy of these and later immigrants is reflected in the Spanish missions and place names that abound throughout the state, in the Chinatowns and Little Tokyo's that have long existed in the state's major cities, in the origins of the wineries that spawned one of the state's major industries, and in a tradition of farm laborers who have harvested the state's abundant agricultural products. Indeed, if the United States can be described as a nation of immigrants, this statement is even more descriptive of California.

Prior studies, both at RAND and elsewhere,[1] have, by and large, suggested that immigrants and the state have served each other well. Yet, as the first chapter has demonstrated, there is increasing concern among the state's residents about the current pattern of immigration to the state. This phenomenon raises the question: How distinctive is the current pattern of immigration to California? In this chapter, we examine that issue from two perspectives. The first focuses on how recent immigration patterns to the state differ from those of the past. The second focuses on how immigrants to California differ from their counterparts in the rest of the country. We begin with a brief review of the history of immigration to California. This review highlights a central feature of recent immigration to California: its unprecedented scale. Next, we describe a second new feature of California's recent immigration: its changing ethnic character. Lastly, we compare the characteristics of the state's recent immigrants with those of their counterparts in the rest of the country. These comparisons indicate that not only do recent patterns of immigration to the state represent a break with the state's past, they also differ in notable ways from immigration to the rest of the country.

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[1] See McCarthy and Valdez, 1986, and Mueller and Espenshade, 1985.

BRIEF HISTORY OF IMMIGRATION TO CALIFORNIA

The 1860 Census, the first subsequent to California's entry into the Union, counted almost 150,000 foreign-born residents out of a total population of 380,000. The next 50 years—a period of dramatic growth both in the country as a whole and in California—was also a period of rapid immigration to both areas (see Table 2.1). Nationwide, the number of foreign-born residents tripled as immigration added an average of 15 percent to the nation's total population in each decade. In California, the foreign-born population increased sixfold, and this increase in immigration added, on average, about 20 percent to the state's growth each decade.

After 1910, however, immigration trends in California and the United States, previously parallel, began to diverge. Nationwide, the rate of growth in the number of new immigrants, which had reached historically high levels in the two decades bracketing the turn of the century, began to decline. The initial decline, during World War I and its aftermath, was gradual; later, in response to restrictive legislation passed during the 1920s and the Great Depression of the 1930s, it was more precipitous. Although national immigration levels rose somewhat after World War II, between 1910 and 1970, the overall number of foreign-born residents in the country declined by 4 million, and immigrants' share of the total population declined from 15 percent in 1910 to less than 5 percent by 1970. Although the growth of California's foreign-born population also slowed somewhat during this period,[2] the total number of immi-

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[2] After growing an average of 33 percent per decade between 1860 and 1910, the foreign-born population of California grew at an average rate of 20 percent per decade

Table 2.1

Growth of the Foreign-Born Population of California and the Nation, 1860–1995

Year	Number of Immigrants (in thousands)		Share of Total U.S. Immigrants Residing in California (percent)
	California	The Nation	
1860	147	4,1139	3.6
1870	210	5,567	3.8
1880	293	6,680	4.4
1890	366	9,249	4.0
1900	367	10,341	3.5
1910	586	13,516	4.3
1920	758	13,920	5.4
1930	1,074	14,204	7.6
1940	925	11,585	8.0
1950	1,088	10,347	10.5
1960	1,340	9,661	13.9
1970	1,758	9,620	18.3
1980	3,580	14,080	25.4
1990	6,459	19,767	32.7
1995	8,000	24,500	32.7

SOURCE: U.S. Department of Commerce, years as shown in table.

grants in the state more than tripled, increasing to close to 1.8 million by 1970. As a by-product of these contrasting trends, California's share of the country's immigrants increased from 4.3 percent in 1910 to 18.3 percent by 1970.

Two pieces of federal legislation that were enacted in the mid-1960s triggered the current era of immigration that began around 1970: the 1964 termination of the Bracero program and the 1965 Immigration and Naturalization Act. In combination, these federal laws reversed the national decline in immigration levels that had been ongoing since early in the century and dramatically increased the flows of immigrants into California.

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from 1910 to 1970. Nationally, the immigrant population grew an average rate of 5 percent per decade during this period.

The termination of the agricultural Guest Worker (or Bracero) program changed the character of Mexican immigration to the United States in two important ways.[3] First, it helped transform the movement of workers between Mexico and the United States from a predominantly legal and seasonal flow to a predominantly illegal and permanent flow. Second, it increased the size of the resident Mexican population as thousands of former braceros, many helped by their employers to obtain legal status, decided to settle in the United States permanently. Many of these new residents were subsequently joined by their families, compounding the initial effect.

Although the Bracero program operated nationwide, its effects were particularly strongly felt in California. On the one hand, for all states other than California, the number of Mexican-born residents increased a little more than fivefold between 1960 and 1990 (from 325,000 to 1.7 million). In California, on the other hand, the increase was tenfold (from 250,000 to 2.5 million). As a result of this growth, California solidified its position as the most-desired destination of Mexican immigrants—between 1960 and 1990, the proportion of all Mexican immigrants living in California increased from 43 to 59 percent.

Just as the termination of the Bracero program changed the character of Mexican immigration, the passage of the 1965 Immigration and Naturalization Act opened up a new era of Asian immigration, both to the United States as a whole and particularly to California. Two features of the 1965 Act were principally responsible for this change. First, it abolished the national origin quotas, which were originally enacted in the 1920s and which had effectively blocked immigration from Asia. In the place of these quota, which strongly favored immigrants from Europe, the 1965 Act instituted a uniform quota of entry permits per country.

Second, it established family reunification as the foremost criterion for determining which potential entrants would be given priority for entry. By ensuring that potential immigrants from all countries had an equal chance at entry, the 1965 Act triggered a surge of new immigration from Asia. Moreover, by assigning priority to potential immigrants who already had close family ties to citizens or permanent resident aliens, the 1965 Act made it much more difficult for potential immigrants from countries with a recent history of immigration to the United States who lacked relatives here to enter the country legally. Over time this proved to be less of a burden for potential immigrants from most European countries—where the demand for entry had already begun to decline[4] — but it was a major problem for potential Mexican immigrants, where the demand for entry continued to increase.

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[3] The Bracero program was initially established as a joint agreement between Mexico and the United States during World War II to help American agriculture cope with labor shortages caused by the war mobilization effort. It was later renewed after the war. Most, but not all, of the guest workers were Mexican. At its peak, approximately 400,000 Mexican workers were entering the United States annually to work in agriculture.

The preferences given to family reunification also, and somewhat ironically, helped make the new Asian immigrants the most skilled in our nation's history. Lacking immediate family ties to U.S. residents but assured a chance at entry equal to European immigrants, most of the post-1965 Asian immigrants initially qualified for entry under preference established for highly skilled immigrants (Keely, 1975). When these new Asian immigrants subsequently became citizens, they were able to bring in certain immediate family members who were exempt from the overall national ceiling, which created a "snowball" effect that eventually allowed large numbers of their relatives to enter the country legally.

Subsequent events, most notably the collapse of U.S.-sponsored regimes in Indochina, combined with the passage of the 1980 Refugee Act, expanded dramatically the number of refugees who could enter the country. Finally, the 1986 IRCA permitted 2.6 million aliens, who were living in the country illegally, to regularize their immigration status. The net result of these developments was a tremendous increase in the number of immigrants entering the country. For example, while there was a decrease in new foreign-born residents by more than 4 million between 1910 and 1970 as compared with previous years, the foreign-born population of the United States increased by over 10 million between 1970 and 1990.

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[4] Although this is true as a general rule, it does not hold for all European countries, e.g., Ireland and Italy.

These effects were most pronounced in California, which by the early 1970s had replaced New York as the state with the largest number of immigrants. The foreign-born population of California, for example, climbed from 1.8 million in 1970 to 6.5 million by 1990—a 260 percent increase. Several factors contributed to California's special attraction. First, California serves as the natural entry point for Asian and many Latin American immigrants, who now constitute a substantial majority of all recent immigrants. Second, California has a long history of both Asian and Latin American immigration, and immigrants often choose to settle in communities where friends and relatives have proceeded them.[5] Third, throughout its history, California has enjoyed the fruits of a booming and diversified economy that has grown much faster than the national average. Indeed, the rapid growth of the state's economy, even more than the discovery of gold at Sutter's Mill, has earned it the title of the nation's "Golden State."

Between 1990 and 1995, another 1.5 million immigrants entered the state. This total matches the pace set during the 1980s, and, as a result, California's share of the national foreign-born population has remained at approximately one-third.

In summary, this brief review of the history of immigration to California highlights two key points. First, California's attraction for immigrants is by no means a recent phenomenon. Immigrants have been drawn to the state in disproportionate numbers since California was first admitted to the Union. Second, despite this history, the scale of recent immigration to California is unprecedented. During the 1970s, the state added 1.8 million foreign-born residents—more than it had added in the prior 70 years together. And between 1980 and 1990, it added an additional 3 million more (again more than in all the other decades of the 20th century—including the 1970s—combined). Since 1990, the pace of immigration to California has continued at approximately the same pace as during the 1980s.

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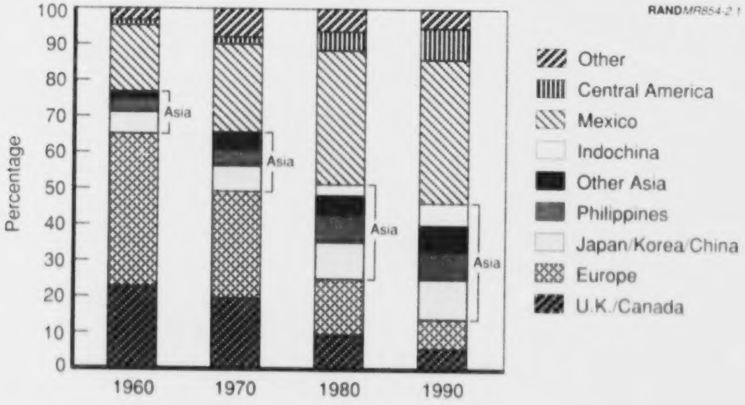
[5] Although California's record of tolerance for Asian and Hispanic residents is not without blemishes, the state also has a tradition of greater tolerance for minorities than some other states. This has, no doubt, also contributed to its attraction for immigrants.

CHANGING ETHNIC COMPOSITION OF CALIFORNIA'S IMMIGRANTS

The recent increase in the number of immigrants coming to California is not the only change that has occurred in recent immigration flows to the state. The legislative changes noted above (the 1965 Act's abolition of the national origin quotas, the 1980 Refugee Act's opening the door to large-scale refugee migration, and the 1986 IRCA law granting amnesty to large numbers of illegal immigrants) combined with changes in the world situation (the post-war economic recovery in Europe, political turmoil in Southeast Asia and Central America, and technological developments in communications and transportation that have increased access to American society) have produced a dramatic shift in the ethnic composition of recent immigrant flows to the state. These changes are depicted in Figure 2.1, which shows how the national origin composition of recent immigrants (those who entered the country in the 10 years pre-



SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

Figure 2.1—The Ethnic Composition of Immigrants Has Changed

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ceding the decennial Census) changed between 1960 and 1990.[6] This figure groups immigrants into nine regional categories.

Figure 2.1 documents the substantial shift that has occurred in the national origins of California's immigrants. Almost half of the immigrants who arrived in California during the 1950s came from Canada or Europe, and the majority of the remainder came from Mexico. By 1990, this distribution had changed in several major ways. First, the number of European-heritage immigrants had plummeted to less than 10 percent of the total. Second, the number of immigrants from Mexico and Central America had climbed to over half of the total. Third, the share of Asian immigrants doubled, and Asians now make up close to 40 percent of all new immigrants to the state.

Moreover, the pattern of immigration from within particular regions has also been changing. Among immigrants of European heritage, for example, the number of continental Europeans and the number of immigrants from the British Isles and Canada was about equal during the 1950s. By 1990, continental Europeans outnumbered British and Canadians by almost 2 to 1. Similarly, although Mexican immigrants have formed the largest single bloc of immigrants throughout this entire 40-year period, their share of the total peaked in 1980 and has subsequently declined somewhat. Central Americans, who composed less than 4 percent of the recent immigrants in 1960, have almost tripled their share and now make up an increasing fraction of the Latin American flow.

The most dramatic changes, however, are evident among the rapidly growing Asian components. In 1960, virtually all recent Asian immigrants to California originated in one of four countries—the Philippines, Japan, Korea, and China. Although the absolute number of immigrants from these countries has continued to increase, their share of the Asian total has declined, while that of Indochina and other Asian countries has climbed sharply.

Although complete data on the national origins of California's most recent immigrants (those who entered in 1990 or later) are not available, the available data on refugee and other legal immigrants suggests that the overall ethnic profile of recent immigrants has not changed dramatically from the pattern observed in the 1980s. Currently, over half the legal immigrants to California come from Asia, up slightly from the 1980s pattern, and another third come from Mexico and Central America, down slightly from the 1980s. The only notable change among immigrants from the rest of the world has been a slight increase in the number of immigrants from Europe—primarily as a result of former Soviet Union and Eastern European refugees and immigrants who have entered the state since the collapse of the Soviet Union (California Department of Finance, 1995 and 1996).

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[6] Figures for the post-1990 period are not available and thus are not included in the figure.

In sum, despite a long and diverse history of immigration, during the last 40 years immigration to California has been marked by its unprecedented scale and ethnic diversity.

CALIFORNIA'S IMMIGRANTS DIFFER FROM IMMIGRANTS NATIONWIDE

As the preceding discussion makes clear, California's share of the nation's immigrants has been climbing steadily throughout the 20th century. During the early 1970s, California became the nation's leading destination for immigrants—a position that has solidified since that time.[7] Currently, about one-third of the nation's immigrants live in the state. But these figures do not fully portray the extent to which the scale of immigration to California stands out as unique in comparison with that to other states.

To provide a clearer picture of the extent to which the scale of recent immigration to California differs from that of other states, Table 2.2 lists the nation's 50 states by order of the percentage of their total population that is foreign born. In the vast majority of states, immigrants constitute such a small percentage of the total population that immigration is not really a major issue. Immigrants, for example,

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[7] Between 1960 and 1970, California's share of the nation's foreign-born population climbed from 13.9 to 18.3 percent, making California the nation's leading immigrant state. Since 1970, that fraction has steadily increased—to 25.4 percent in 1980 and to 32.7 percent in 1990.

Table 2.2

Distribution of States by Percentage of the Foreign-Born Population, 1990

Percentage Foreign-Born	States	Total Number
<1	KY, MS, AL	3
1–1.9	SD, WV, AR, TN, SC, ND, MO, NC, IN, IA, NE, MT, LA	13
2–2.9	OK, WY, OH, KS, GA, ID, MN, WI, ME	9
3–3.9	PA, NH, VT, UT, DE, MI	6
4–4.9	CO, VA	2
5–5.9	OR, AK	2
6–6.9	NM, MD, WA	3
7–7.9	AZ	1
8–8.9	CT, NV, IL, RI	4
9–9.9	TX, MA	2
10–12.49	NJ	1
12.5–14.9	FL	1
15–17.49	HI, NY	2
17.5–19.9	–	–
20+	CA	1

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

NOTE: Average for all states = 5.6 percent; median = 2.8 percent; California = 21.7 percent.

represent less than 3 percent of the total population in half of all states and less than 5 percent in two-thirds of the states. Indeed, immigrants constitute more than 10 percent of the population in only five states, and California has almost 40 percent more immigrants as a fraction of the total population (21.7 versus 15.7) than New York, the next-highest state. At least in terms of numbers, then, California's immigrant population differs in scale from that of other states—typically by a factor of three or more.

A more general issue, however, is whether the characteristics of the immigrants living in California are similar or differ from those of immigrants living elsewhere in the United States. In other words, are California's immigrants unique or are they more or less typical of immigrants nationwide?

There are, of course, several ways in which such comparisons can be drawn. We begin by comparing California's foreign-born population with that in the rest of the country along two general dimensions:

their region of origin and their legal status. In addition, we draw comparisons by age, duration of residence, education, and economic behavior because these characteristics are relevant to three of the specific issues that dominate the current immigration policy debate: How do immigrants affect the public sector? How do they affect the economy? and How well do immigrants adjust socially and economically to their new country? Because public service usage (e.g., schools, health services, etc.) varies systematically over the life cycle—as, of course, does labor force behavior—differences in age structure are clearly important to immigrants' demand for public services and their role in the economy. Moreover, as we will demonstrate in succeeding chapters, differences in educational levels play a critical role in explaining the economic success of immigrants, the types of jobs for which they may be qualified, and their need for public services. Finally, differences in employment and earnings provide direct measures of the economic success and adaptation of immigrants.

Differences in the national origins of immigrants inside and outside California are compared in Figure 2.2. Not surprisingly, California's immigrants come disproportionately from those regions, Asia and Latin America, that currently send the nation the majority of its immigrants. Specifically, 78 percent of California's immigrants come from these regions versus 41 percent of the immigrants to the rest of the country. However, the majority of immigrants (almost 60 percent) in the rest of the country come from areas that have historically dominated the nation's immigrant inflow but now send many fewer immigrants.

These differences in national origin help explain why the immigration statuses of California's foreign-born population differ from those of immigrants in the rest of the country. Although there are no definitive counts of the foreign-born population by immigration status, we have reviewed various estimates of the number and percentage of foreign-born residents in California and the balance of the country by legal status. Our estimates for 1995, based on this review, are listed in Table 2.3.[8]

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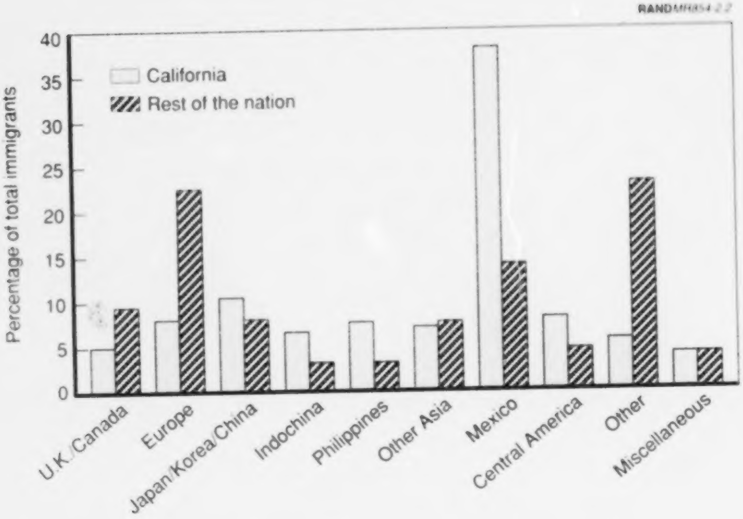
[8] The basis of these estimates is described in Appendix B. The most troublesome component of these estimates is the illegal population. The INS recently issued estimates suggesting that in 1996 the population of illegal residents in the United States totaled



SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

Figure 2.2—Distribution of Immigrants by Region of Origin and Current Residence, California and Non-California Immigrants, 1990

California's foreign-born population appears to contain a smaller proportion of naturalized citizens but higher proportions of amnesty recipients, illegal aliens, and refugees than the rest of the country. Specifically, while over 40 percent of the immigrants in the balance of the United States have become naturalized citizens, less than 33 percent of California's foreign-born residents are naturalized. However, almost twice as high a proportion of California's foreign-born residents are either amnesty recipients or lack legal documentation (39 percent) as the foreign-born population in the rest of the

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approximately 5 million, with 2 million of these residents in California. This figure is substantially higher than the INS 1993 estimate of 3.4 million and the Census Bureau 1994 estimate of between 3.5 and 4 million (Fernandez and Robinson, 1994). For a detailed discussion of the issues involved in estimating the size of the illegal population, see Johnson, 1996.

Table 2.3

Comparison of Foreign-Born Residents by Legal Status, in California and the Rest of the Nation, 1995

	California		Rest of the Nation	
	Number	Percentage	Number	Percentage
Naturalized	2,300	29	6,700	41
Legal residents	4,100	51	7,400	45
Refugees[a]	700	9	900	6
Amnesty	1,500	19	1,150	7
Other	1,900	23	5,350	32
Illegal	1,600	20	2,400	14
EWI[b]	1,200	15	1,200	7
Visa abusers	400	5	1,200	7
Total	8,000	100	16,500	100

SOURCES: U.S. Department of Commerce, *Public Use Sample*, 1990; California Department of Finance, 1996a and 1996c; U.S. Department of Justice, 1992 and 1996.

[a] Includes refugee admissions since 1980 only.

[b] Entered without inspection.

country (21 percent). Moreover, a much higher fraction of California's illegal aliens appear to have entered the country without inspection (EWI), whereas in the balance of the country about as many illegal aliens enter the country legally and then become illegal by violating the terms of their visas (most typically by failing to leave when their visas expire).[9] California also appears to have twice as high a fraction of refugees as the rest of the country.

As suggested above, these differences appear to be largely a result of differences in the ethnic origins of immigrants in California and the rest of the country. The INS has estimated, for example, that almost half of the illegal aliens in the United States in 1992 came from

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[9] Doris Meissner, the commissioner of the INS, estimated that 60 percent of all illegal immigrants enter the country without inspection, versus 40 percent who violate the terms of their visas (*New York Times*, 1996a). However, there are major differences in this proportion by country of origin. Over 85 percent of the IRCA amnesty recipients from Mexico and Central America entered the country without inspection. By contrast, almost 75 percent of the amnesty recipients from all other countries entered the country legally and then violated the terms of their visas (Smith, Kramer, and Singer, 1996).

Mexico or Central America (INS, 1996a). These two areas supply almost half of all California's foreign-born residents. Moreover, nearly 80 percent of the immigrants in California who received amnesty came from Mexico (INS, 1996a). Similarly, the disproportionate presence of refugees in California seems to be a result of the large fraction of Indochinese among the refugee population.[10]

One other factor that helps explain why a much higher fraction of immigrants in the rest of the country have become naturalized citizens than in California is that a larger fraction of California's immigrant population are recent arrivals. Although most immigrants, regardless of where they now live, entered the country after the recent surge of immigration to the country began in 1970, nationwide about as many immigrants have been in the country at least 30 years as have entered during the last 5. In contrast, three times as many California immigrants entered the country in the last 5 years as entered 30 years ago. As a result, the typical immigrant nationwide has been in the country one-third longer than the typical California immigrant (14.9 versus 10.9 years). The fact that immigrants have generally lived in the California for shorter periods than their counterparts in the rest of the country also helps to explain why California's immigrants are, on average, much younger than immigrants elsewhere in the country (the median age of California's immigrants, 32.7 years, is fully 9 years younger than immigrants elsewhere, 41.6).

In addition to these basic demographic differences, there are also important differences in the socio-economic profile of immigrants in the state and elsewhere. California's immigrants, for example, have a half-year less schooling than immigrants outside California (the median years of schooling among California immigrants older than 24 is 12.4 years versus a median of 12.8 years for those outside California). Once again, however, this difference appears to be largely a function of the different ethnic origins of California's immigrants. This pattern is apparent in Table 2.4, which compares immigrants' educational levels inside and outside California. The second and third

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[10] Not only do Indochinese immigrants disproportionately choose California as their preferred place of residence when they initially settle in the United States, but a significant share of those who initially settle elsewhere later move to the state (California Department of Finance, 1996c).

Table 2.4

Comparison of 1990 Educational Levels Among Immigrants, in California and the Nation, Unstandardized and Standardized for Region of Origin

Years of Education	Actual Levels		Standardized Levels	
	California	Nation	California	Nation
<12	41.1	29.9	33.7	33.7
12	22.9	27.1	25.7	25.8
13–15	19.9	21.3	20.8	20.2
16+	16.1	21.7	19.8	20.5
Total	100.0	100.0	100.0	100.0

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

NOTE: Levels are standardized by assuming that the distribution of California immigrants older than 25 by origin is identical as to that of the United States.

columns of this table compares the aggregate educational distribution of immigrants without regard to their region of origin. This comparison highlights the lower average level of education of California's immigrants. The final two columns show how these distributions would change were immigrants inside and outside California to have come to both areas in direct proportion to the ethnic distribution of immigrants to the United States as a whole.[11] As these data indicate, the substantial difference in educational levels apparent in the second and third columns all but disappears. In sum, the fact that immigrants to California are less well educated than immigrants nationwide is a by-product of the much higher fraction of California's immigrants who come from countries with lower average educational levels.

The final comparison in this section examines trends in labor force participation, employment rates, and weekly earnings levels among immigrants in California and elsewhere (Table 2.5). This comparison demonstrates that, on the one hand, labor force participation and employment rates among both male and female immigrants have

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[11] These comparisons have been constructed by applying the actual educational distribution of immigrants by area of origin within and outside California to the distribution of immigrants by ethnic origin nationwide.

Table 2.5

Ratio of Labor Force Participation, Employment Rate, and Earnings Level Between Immigrants in California and the Nation, by Gender, 1970–1990

Year	Labor Force Participation	Employment Rate	Weekly Earnings
	Males 25–64		
1970	0.98	1.00	0.97
1980	0.99	1.00	0.93
1990	0.99	1.00	0.93
	Females 25–64		
1970	0.97	0.99	1.03
1980	0.99	1.00	1.01
1990	0.96	1.03	0.99

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970–1990.

NOTE: All ratios equal level in California divided by level in the nation.

remained virtually equal in California and the rest of the country.[12] Earnings levels, on the other hand, appear to have diverged slightly between the two areas. In fact, wage levels for male immigrants have declined in both areas but slightly more in California than outside the state. For female immigrants, wage levels have declined slightly in California and remained stable in the rest of the country.[13]

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[12] In fact, the overall trend of labor force and employment rates among immigrants in both areas has followed the same patterns as it has among native-born men and women. Specifically, rates for males have declined, while rates for females have risen. Among male immigrants, for example, labor force participation rates declined 5 percent and employment rates 3 percent, both in California and elsewhere, between 1970 and 1990. Among female immigrants, however, labor force participation rates increased by nearly 33 percent and employment rates by close to 40 percent.

[13] Average wage levels among male immigrants in California declined by about 25 percent between 1970 and 1990 (from $560 to $416 in 1990 dollars) and by 22 percent (from $575 to $446 in 1990 dollars) in the rest of the country.

CONCLUSIONS

Whether measured in terms of California's own past or in comparison with the experience of other states, it is clear that the profile of recent immigration to California is unique. Although immigrants have always been drawn to California, the levels of immigration to the state during the past two decades have truly been unprecedented. For example, the number of foreign-born residents in the state doubled during the 1970s and then doubled again during the 1980s. Moreover, as the numbers increased, the composition shifted, with Asians and Latin Americans now constituting the vast majority of all recent immigrants. One by-product of this pattern is that California's foreign-born population contains a much higher fraction of immigrants who were formerly amnesty recipients or are currently undocumented.

In addition, the profile of California's immigrants differs markedly from that of immigrants elsewhere. First and foremost, these profiles differ in terms of scale—not only are there many more immigrants in California than elsewhere but immigrants constitute a much larger fraction of California's population than any other state's. Thus, one might expect that the effects of recent immigration will be felt more sharply here than in the rest of the country. In addition, California's immigrants are decidedly younger, have been in the country for a shorter period, and have somewhat less schooling. They also have a very different ethnic profile from that of immigrants in the rest of the United States. By and large, these differences in age and education appear to be a by-product of the recency and origins of California's immigrants. Finally, although patterns of employment and labor force participation among immigrants are very similar throughout the country, there appears to be a growing divergence in earnings levels between California's immigrants, both men and women, and immigrants in the rest of the country.

Chapter Three

PROFILE OF CALIFORNIA'S RECENT IMMIGRANTS

In November 1994, California's voters decisively approved (by a 59 to 41 percent margin) Proposition 187—a ballot initiative barring illegal immigrants from receiving public services. Although Proposition 187 was limited to illegal immigrants, the size of the yes vote raises the question, Were Californians passing judgment on immigration more generally? And if so, did this vote signal a massive shift in public opinion against immigrants?

In fact, polling data on public attitudes toward immigrants (legal and illegal) suggest that Californians have never been particularly proimmigrants of any kind.[1] Since polls first started asking Californians their attitudes about immigration, their responses have expressed what can best be described as mild hostility toward immigrants. Throughout the 1982 to 1994 period, for example, between 50 and 60 percent of the public has expressed the belief that legal immigration should be reduced. Questions about whether illegal immigration should be reduced have drawn even stronger support.[2] In this respect, Californians' attitudes about immigrants mirror patterns found among the American public at large (Simon, 1987 and 1993; Espenshade and Hempstead, 1996) and, in fact, are relatively close to the final vote on Proposition 187.[3]

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[1] The most complete analyses of Californians' attitudes about immigrants are contained in articles by Barkan (1984; and forthcoming). We are especially indebted to Professor Barkan for sharing his data on recent public attitudes.

[2] These polling results are contained in Barkan (forthcoming).

[3] An even greater percentage of Californians believe that illegal immigration is a major problem (between 65 and 80 percent), and only a minority of the state's residents be-

Although a variety of explanations could be offered to explain the public's negative attitudes toward immigrants (both legal and illegal), one factor that seems to be at play is the perception that the character of recent immigrants to the state has changed. This perception could take several forms. It might refer, for example, to the changing ethnic mix among California's recent immigrants. Both national and California polling data indicate, for example, that public attitudes about immigrants differ strikingly depending upon which ethnic groups are involved. (Simon, 1987 and 1993; Barkan, forthcoming). Long-established ethnic groups, which may have been negatively viewed when they entered the country, are now viewed in a much more positive light. More recently arriving ethnic groups, however, are viewed much more negatively. Thus, European groups (e.g., Irish, Germans, Poles, Italians) as well as Asian immigrants with a long history of immigration to the country (e.g., Japanese and Chinese) are viewed favorably by a majority of Americans (Simon, 1993; Barkan, forthcoming). Newer groups (e.g., Southeast Asians, Central Americans, Koreans, and Mexicans) are not.

Alternatively, this negative perception could refer to changes in the detailed demographic and economic characteristics of immigrants. California's recent immigrants might, for example, look less like the state's native-born residents along such dimensions as their age, marital status, educational levels, and labor force participation than did immigrants who arrived one or two decades ago. Another manifestation of change might be in the legal status of California's foreign-born population. As the previous chapter demonstrated, a much higher fraction of California's immigrant population consists of amnesty recipients and illegal aliens than does the foreign-born population in the balance of the country. Whatever changes might in fact have occurred, the unprecedented scale of recent immigration to California could certainly intensify the public's perception of the change.

In the discussion that follows we present a profile the state's foreign-born population, which is designed to identify the characteristics of California's foreign-born population, to determine how the charac-

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lieve that giving amnesty to illegal immigrants, as was done in the 1986 IRCA law, was a good idea (Barkan, forthcoming).

teristics of immigrants may have changed and to show how this population differs from the state's native-born residents. We begin by presenting a more detailed description by national origin and then compare the socio-demographic characteristics of the different national-origin groups. To compare country-of-origin differences, we use the same nine origin categories identified in the prior chapter. Each of these categories represents a significant share of the state's foreign-born population, describes roughly contiguous geographical populations, and displays considerable similarity across characteristics. Together the eight major groups[4] represent 92 percent of the state's foreign-born residents in 1990. We conclude the chapter by highlighting some important differences among immigrants by legal status.

DIFFERENCES WITHIN THE IMMIGRANT POPULATION: NATIONAL ORIGINS

Chapter Two demonstrated that the ethnic profile of California's recent immigrants has shifted during the past 30 years. Table 3.1 presents a more complete picture of the results of this change by showing the 1990 distribution of California's current foreign-born population by country of origin. Immigrants are grouped by region of origin and within region by country of origin for countries that have supplied at least 100,000 immigrants. The table also list the proportion of each origin group who entered between 1980 and 1990.[5]

Three aspects of the ethnic profile of California's foreign-born residents stand out in this table. First, Mexican immigrants are clearly the dominant foreign-born population in the state. They constitute almost 40 percent of the state's immigrants and are five times more numerous than Filipinos, the next largest national-origin group.

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[4] The residual, or other, category contains immigrants from Africa, Oceania, South America, and those whose origin is missing. Together they constitute about 8 percent of the state's immigrants.

[5] As we noted in Chapter Two, although we lack comprehensive data on how the national-origin composition of immigrants has changed since 1990, the available evidence suggests that those changes have been relatively minor.

Table 3.1

Distribution of California's Foreign-Born Residents, by Region of Origin and Period of Entry, 1990

Region/Country of Origin	Number of Immigrants	Percentage of Total Immigrants	Percentage of Immigrants Who Entered 1980–1990
Africa	*70,000*	*1.1*	*57.3*
Asia	*2,020,000*	*31.2*	*57.6*
China/Taiwan	385,000	6.0	54.3
Korea	200,000	3.1	57.5
Japan	100,000	1.5	45.6
Philippines	485,000	7.5	50.8
Vietnam	270,000	4.2	65.5
Other Indochina	135,000	2.1	82.2
Iran	120,000	1.9	58.1
Other Middle East	100,000	1.5	44.0
South Asia	120,000	1.9	61.6
Other Asia	105,000	1.6	56.2
Europe	*680,000*	*10.5*	*24.7*
United Kingdom	155,000	2.4	25.9
Germany	150,000	2.3	23.2
Southern Europe	120,000	1.9	13.7
USSR/Eastern Europe	185,000	2.9	38.6
Other Europe	70,000	1.1	10.4
North America	*230,000*	*3.6*	*18.7*
Canada	150,000	2.3	15.7
Caribbean	80,000	1.2	23.6
Latin America	*2,995,000*	*46.3*	*53.9*
Mexico	2,450,000	37.9	50.7
El Salvador	285,000	4.4	72.0
Guatemala	140,000	2.2	74.5
Other Central America	120,000	1.9	51.7
South America	*165,000*	*2.6*	*45.1*
Oceania	*45,000*	*0.7*	*46.2*
Other	*260,000*	*4.0*	*55.0*
Total	6,465,000	100.0	50.1

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

Second, other than Mexicans, no single origin group dominates among the state's foreign-born population. Instead, California is home to a very diverse mix of immigrants. Third, judging by the fraction of the immigrants who entered during the 1980s, California's immigrant groups can be roughly divided into three different categories: the old immigrants (primarily those of European and Canadian heritage), around 70 percent of whom have been in the state more than a decade; the newer but still traditional groups (most of the Asian groups and the Mexicans), about half of whom have been in the country for a decade; and the new immigrant groups (principally the Indochinese and the Central Americans), about 75 percent of whom entered the country in the past decade.

To the extent that public attitudes about immigrants are shaped by the perception that the ethnic mix of today's California immigrants is different than it was in the past, then that perception is only partially correct. The number of "new" immigrants (Indochinese and the Central Americans) currently surpasses the "old" immigrants (the Europeans and Canadians). However, about 70 percent of California's foreign-born residents fall into neither of these categories but come instead from areas, Mexico and Asia, that have a tradition of sending immigrants to the state.

Although ethnic differences within the immigrant population are often highlighted in profiles of immigrants, their ultimate policy significance may depend more on how they are correlated with other demographic, social, and economic factors than on ethnicity alone. Thus, we now examine a wide range of immigrants' sociodemographic characteristics and how they correlate with national origin.

PROFILE OF CALIFORNIA'S IMMIGRANTS BY ORIGIN

As suggested above, California's immigrants can be generally sorted in terms of the recency with which their nationality group began coming to the state. If, in addition, we sort these groups in terms of their general social and economic profile (and how it differs from the state's native-born residents), we can identify four distinct ethnic or national origin categories. Two of these groups, European-heritage (including Canadians) and non-refugee Asian immigrants, who together total about 40 percent of the total foreign-born population, compare favorably with, and often exceed, the native-born population in terms of education and earnings levels. The other two groups—Mexican and Central American, and Indochinese refugees—lag substantially behind native-born residents in both education and earnings, and these gaps may well be increasing. In the comparisons that follow, we document these differences along demographic, education, and economic dimensions. Finally, we summarize the distinctions among these four groups.

Demographic Differences

Demographically, the various major origin groups differ in several important respects (Table 3.2). The traditional European-heritage

Table 3.2

Demographic Characteristics of California's Foreign-Born Residents by Region of Origin, 1990

Origin	Recent Entry (%) ('80–'90)	Median Length of Residence (Years)	Median Age	Male/Female Ratio, Age 18–34	Living with Spouse (%)	Median Household Size
European Heritage						
U.K./Canada	20.8	27.5	50.9	1.13	62.8	2.43
Europe	24.3	25.1	51.5	0.99	66.7	2.55
Traditional Asian						
Japan/Korea/China	54.0	9.4	40.0	0.88	64.6	3.56
Philippines	50.8	9.87	40.3	0.75	59.6	4.27
Other Asia	55.5	8.8	34.9	1.18	61.5	3.60
Indochinese	71.1	7.6	29.7	1.02	53.0	5.26
Latin American						
Mexico	50.7	9.8	29.7	1.45	51.0	5.11
Central America	68.1	7.3	30.2	1.06	42.2	4.63
Other	42.6	12.8	38.2	1.12	57.1	3.29
Total	**50.1**	**10.9**	**32.7**	**1.22**	**57.5**	**4.03**
Native-born population	NA	NA	30.9	1.06	50.9	2.71

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

NOTE: NA means not applicable.

immigrants (United Kingdom/Canada and European), for example, have generally been in the country for several decades; are substantially older, not only than other immigrants but also than the native-born population; are very likely to be married and living with their spouses; and live in very small households. About half of the traditional Asian immigrant groups (Japanese, Koreans and Chinese, Filipinos, and other Asians) have been in the United States for more than a decade, are about 10 years younger than the traditional immigrant groups, but are between 5 and 10 years older than the average immigrant statewide. They are somewhat less likely to be living with a spouse but have somewhat larger households. Mexican immigrants have about the same duration of residence as the traditional Asian immigrants but tend to be considerably younger, are less likely to be living with a spouse, and have much larger households. The state's newest immigrant groups (Central Americans and Indochinese) have been in the country for a much shorter time than other immigrants but otherwise have characteristics that are akin to those of Mexicans. That is, they are younger, (indeed, they are younger on average than native-born residents), are less likely to be living with a spouse, and live in large households.

The one demographic factor that does not appear to be closely linked to the others is the gender ratio of immigrants age 18–34. In general, most of the groups compared here fall within a range of .90 to 1.10 males per females. There are, however, two notable exceptions to this pattern: immigrants from the Philippines (who are much more likely to be female than other immigrants) and immigrants from Mexico (a disproportionate share of whom are male).

Figure 3.1 adds an additional element to this demographic profile by showing where these different groups are concentrated within the state. For the purposes of this comparison, the state is divided into five regions: (1) the six-county San Francisco consolidated metropolitan statistical area, (2) the twelve counties in the state's San Joaquin Valley, (3) the five counties in the Los Angeles-Anaheim-Riverside consolidated metropolitan statistical area, (4) the 31 coun-

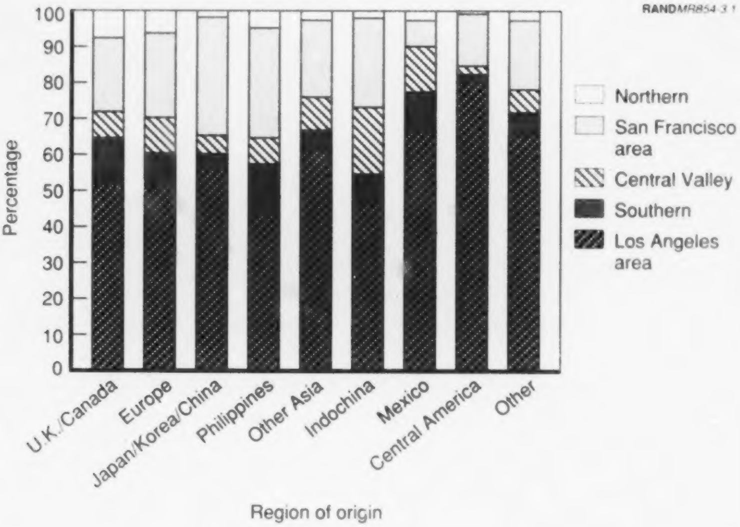

Figure 3.1—Distribution of California's Foreign-Born Residents, by Region of Origin and Area of Current Residence, 1990

ties in the balance of northern and central California, and (5) the remaining four counties in Southern California.[6]

Reflecting the fact that approximately half of California's total population is located in the greater Los Angeles metropolitan area, a plurality (and in most cases, a majority) of all origin groups are located in the Los Angeles area. Nonetheless, there are still substantial differences in the geographic distributions of the various immigrant groups. Roughly 75 percent of the state's Mexican and Central American immigrants, for example, are located in Southern California—with a decided concentration in the Los Angeles area. Indeed, over 70 percent of the state's Central American immigrants are located in Los Angeles County. The state's European-heritage immigrants, as well as the traditional Asian immigrants, are disproportionately represented outside Los Angeles (in the case of the Japanese, Chinese, Korean, and Filipino groups, in the San Francisco Bay area). The most evenly distributed immigrant group is the Indochinese population. About 20 percent of these immigrants are located in Northern California, about 25 percent in the Central Valley, about 25 percent in Los Angeles County, and about 20 percent in the Los Angeles Fringe. Whether as a result of networks of friends and relatives, job opportunities, or some other factors, California's immigrants tend to sort themselves geographically within the state. Mexican and Central American immigrants are more likely to settle in Southern California, and especially in the Los Angeles area, than in other areas. The traditional Asian immigrants, however, are about as likely to settle in the San Francisco as the Los Angeles area. Finally, Indochinese immigrants are more evenly distributed across the state but have settled in the Central Valley much more often than other nationality groups.

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[6] The greater Los Angeles metropolitan area consists of the 5-county Los Angeles standard consolidated statistical area (Los Angeles, Ventura, San Bernardino, Riverside, and Orange); the balance of Southern California contains the 4 counties south of the Tehachapis that are not located in Los Angeles or in the Central Valley (San Diego, Imperial, Santa Barbara, and San Luis Obispo); the Central Valley consists of the 12 countries of the San Joaquin Valley extended from Kern County in the south to Yolo county in the North; and the San Francisco Bay area includes the 6 counties surrounding the bay, San Francisco, Marin, Alameda, Contra Costa, San Mateo, and Santa Clara. The remaining 31 counties in the state are located in the "other" north area.

Educational and English Proficiency

Table 3.3 adds another element to the profile of the various origin groups by comparing these populations' educational levels and English language proficiency. In terms of education, there appears to be a clear dichotomy between the traditional European-heritage and major Asian groups at one extreme and the Mexican and more recent Indochinese and Central American immigrants on the other. The former groups have high average levels of education—indeed, levels that actually exceed those of native-born residents; the latter groups lag behind (in the case of Mexican immigrants, far behind). Although in most cases, average levels of education appear to be higher among more recent immigrants, the differentials between groups hold both for recent and earlier immigrants.

Table 3.3

Educational Levels and English Language Ability, by Region of Origin and Period of Entry, for California Immigrants, 1990

	Median Years of Schooling			Speak English Well (percentage)		
Origin	Recent	Earlier	Total	Recent	Earlier	Total
European Heritage						
U.K./Canada	15.0	14.2	14.3	98.7	99.6	99.4
Europe	14.7	13.5	13.8	75.6	92.1	88.2
Traditional Asian						
Japan/Korea/China	14.2	14.9	14.6	58.5	75.6	66.4
Philippines	15.7	15.4	15.5	91.1	95.4	93.2
Other Asia	12.0	15.6	14.5	77.6	92.4	84.3
Indochinese	10.9	13.4	12.2	54.1	76.7	60.7
Latin American						
Mexico	8.0	7.3	7.5	38.6	61.9	50.4
Central America	9.6	11.7	10.5	48.9	73.8	57.0
Other	13.8	13.8	13.8	78.5	86.1	82.9
Native-born residents	NA	NA	13.8	NA	NA	NA

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

NOTES: Recent immigrants refer to those who entered the country between 1980 and 1990. Earlier immigrants refer to all others. NA means not applicable.

Table 3.4, which compares changes in the fraction of recent entrants from each origin group at the bottom (less than a high school diploma) and top (at least a college degree) of the educational distribution, shows that educational levels have generally increased sharply between the 1950s and the 1980s. In all but two cases, the Indochinese and Central Americans, the proportion of recent immigrants without a high school diploma has dropped, while the percentage with a college degree has risen. In most cases, these changes have been substantial. However, the initial differences among the groups have persisted. Indeed, the most striking finding in this comparison is the substantial difference in educational levels between Mexican and all other immigrants in both periods. The declining levels of education among the two most recent immigrant groups,

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Table 3.4

Changing Educational Levels of California Immigrants by Ethnicity, 1960 and 1990 Entry Cohorts

	Less Than 12 Years of Schooling		College Degree	
	1960	1990	1960	1990
European Heritage				
U.K./Canada	31	3	13	39
Europe	37	10	21	40
Traditional Asian				
Japan/Korea/China	22	10	13	39
Philippines	32	5	17	50
Other Asia	9	11	18	43
Indochinese	33	39	22	8
Latin American				
Mexico	89	54	2	6
Central America	22	45	18	6
Other	45	9	28	30

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960 and 1990.

NOTE: Entry cohorts are defined as those who enter in 10 years prior to the Census.

Central Americans and Indochinese, coincide with a shift in the nature of these flows, from small, relatively selective to much broader based and larger flows.[7] In the process, educational levels have declined. English proficiency also varies sharply among nationality groups. This variation is to some extent a by-product of different educational levels; for example, the Indochinese, Mexicans, and Central Americans rank lowest both in terms of educational levels and English language proficiency. But education does not tell the whole story. Some groups with high educational levels, e.g., immigrants from Japan, Korea, and China, are much less likely to speak English well, both when they first enter the country and after they have been

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[7] Prior to 1970 there were too few Indochinese immigrants in the United States to make a reliable estimate of their characteristics. Consequently, the comparison for Indochinese is between immigrants entering in the 1960s and those entering in the 1980s.

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here for a decade, than comparably educated immigrants, e.g., Filipinos. The distinguishing factor here is whether English is used as a second language in their homeland—it is in the Philippines and on the Indian subcontinent. The highest levels of English proficiency are found, of course, among immigrants from countries where English is the primary language. Regardless of the initial differences in education and English ability, however, immigrants' English skills generally improve with their length of stay in the country.

Economic Characteristics

Given these differences in education and English ability, one might expect that the labor market experience of these groups would also differ. Any such initial differences would further be compounded by the substantial differences in the average duration of residence among origin groups, since earnings, in particular, increase with labor market experience. Correspondingly, to round out our profile of the different origin groups, Tables 3.5 and 3.6 compare the labor force participation rates and annual earnings of prime-age (25–64) male and female immigrants by region of origin.[8] To control for differences in average duration of residence, these comparisons are drawn separately for recent and earlier immigrants.

Male labor force participation rates generally vary within a narrow range, especially among immigrants who have been in the country for at least a decade, with one notable exception. Labor force participation rates among Indochinese immigrants, both those who are new to the country and those who have been here at least a decade, are significantly lower than for other groups. For example, while the participation rates for earlier male immigrants range from 87 to 91 percent for eight of the nine groups, the rate for Indochinese immigrants is only 78 percent. The range is somewhat larger (and the rates generally lower) for more recent immigrants—probably

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[8] The previous employment comparisons in this and the prior chapter reported both labor force participation and employment rates. Table 3.5, however, is limited to a comparison of labor force participation rates among these groups. The reason for this is that once controls are introduced for differences in labor force participation rates, most of the differences in employment rates disappear.

Table 3.5

Comparison of Labor Force Participation Rates Among California Immigrants by Country of Origin, Period of Entry, and Gender (in percentage)

	Labor Force Participation			
	Males		Females	
Origin	Recent	Earlier	Recent	Earlier
European Heritage				
U.K./Canada	90.0	88.8	67.0	68.9
Europe	79.8	87.3	54.8	63.1
Traditional Asian				
Japan/Korea/China	77.1	88.6	53.9	68.4
Philippines	91.0	91.1	79.7	84.4
Other Asia	77.6	91.0	49.2	66.4
Indochinese	60.0	78.5	39.1	63.0
Latin American				
Mexico	90.7	89.4	51.9	58.9
Central America	89.3	89.6	66.6	71.2
Other	85.9	90.4	92.9	71.0
Native-born population	NA	86.0	NA	72.0

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.
NOTE: NA means not applicable.

reflecting differences in English language skills or market experience—but the pattern is similar. The lower labor force participation rate for Indochinese may well be a by-product of their refugee status and the fact that, as refugees, they qualify for special welfare programs for which other immigrants do not.[9]

The pattern is somewhat different among female immigrants, just as the range of rates is substantially greater. Among females who have been in the country for at least a decade, Filipinas stand out because of their very high labor force participation rates. Among more recent immigrants, the very high rates of Filipina labor force participation at

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[9] Indeed, refugees use public assistance at two to three times the rate of other immigrants. (see Chapter Seven).

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Table 3.6

Ratio of Immigrants' Annual Earnings to Native-Born Workers' Earnings by Origin, Period of Entry, and Gender, in California, 1990

	Earnings Ratio of Males		Earnings Ratio of Females	
Origin	Recent	Earlier	Recent	Earlier
European Heritage				
U.K./Canada	1.46	1.60	1.29	1.42
Europe	1.05	1.51	0.92	1.25
Traditional Asian				
Japan/Korea/China	1.77	1.43	0.78	1.30
Philippines	0.73	1.14	1.06	1.50
Other Asia	0.83	1.47	0.79	1.25
Indochinese	0.59	1.03	0.73	1.13
Latin American				
Mexico	0.45	0.72	0.50	0.69
Central America	0.49	0.78	0.56	0.84
Other	0.72	1.24	0.78	1.20

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

the top of the range is matched by very low rates for recent Indochinese and other Asian immigrants. This may reflect cultural differences in views about women engaging in market work, or it may be a reflection of changes in the characteristics of more recent immigrant flows, as was suggested above.

The similarities in labor force participation, especially among male immigrants, stand in sharp contrast to the differences in average earnings levels across groups. This point is strikingly evident in Table 3.6, which compares the ratio of each group's average earnings to the average for the various groups taken as a whole. European-heritage immigrants earn higher-than-average wages even when they are still recent arrivals. All of the other groups, however, begin their labor market experience at a significant earnings disadvantage, and that disadvantage is greatest among those immigrant groups with the lowest average levels of education. Moreover, whereas earlier Asian immigrants have substantially higher-than-average earnings after they have been in the country for 10 years (and presumably, have gained labor market experience and English language skills), the least-well-educated immigrants (most particularly the

Mexicans and Central Americans) have significantly lower-than-average earnings even after they have been in the country for more than 10 years.

The same general pattern is apparent among female immigrants—although, once again, Filipinas stand out for their higher earnings both shortly after entry and after they have been in the country more than 10 years. Finally, as was true among males, female Mexican and Central American immigrants begin at a significant disadvantage relative to others and remain far behind even after a decade in the country.

Summary of Comparisons

Table 3.7 summarizes the results of these comparisons for the four different groups of immigrants.

The first group consists of immigrants from Europe, the United Kingdom, and Canada. Although now only a small fraction (14 percent) of California's foreign-born population, these residents formed the majority of all new immigrants to the state as recently as 30 years ago. Today, most have been in the country more than 30 years; they are older, better educated, more fluent in English, and earn more than other immigrants and, often, more than native-born Californians.

The second group consists of the various Asian-origin immigrants, with the exception of the Indochinese. These groups started to appear in significant numbers within the last 25 years (after the passage of the 1965 Immigration and Naturalization Act did away with the old national origin quotas) and now constitute a little over 30 percent of the state's immigrants. Although by no means homogeneous, they are generally somewhat younger than Europeans, are about as well educated, but are, on the whole, less proficient in English when they arrive in the country than were those of European heritage. Although Asian-origin immigrants' average earnings lag behind other immigrants during their first 10 years in the country, after a decade or so of residence, their incomes are substantially higher than average.

Table 3.7

Summary Comparison of Immigrants, by Origin and Socio-Demographic Characteristics

Group	Percentage of All Immigrants	Mean Length in Country	Demographic	Level of Education	English Proficiency	Labor-Force Participation	Earnings
European Heritage	14	25+ yrs	distinctly older, married, small household	high and rising	very high	moderate to high	high
Traditional Asian	25	9–10 yrs	somewhat older, married, small household	high and rising	low at first, higher later	moderate to high	low at first, higher later
Indochinese	6	8 years	younger, large households	low and declining	moderate to low	very low	low
Mexican/ Central American	46	7–10 yrs	young, fewer married, very large households	low/stable or declining	very low	high	very low

The one group of Asian immigrants whose characteristics set them apart are the Indochinese—who are in the third group. Not only are they the most recent of the Asian immigrants but they are by far the youngest and have the largest households. More important, their educational levels lag well behind other Asians and seem to actually be dropping somewhat—reflecting what appears to be a transformation of the immigrant flow from Indochina to the United States—from a rather small and highly selected migration to a much larger and more broadly based flow that better represents the general populations in these countries. Indochinese immigrants also stand out from all of California's other immigrants in terms of their much lower levels of labor force participation, employment, and earnings.

The fourth group of immigrants, who together constitute a little less than half of the total, are Mexicans and Central Americans. Although there are some significant differences between these two groups, e.g., Mexico has a much longer history of sending large numbers of immigrants to the United States, they share many characteristics and are much more similar to each other in term of age, household size, education levels, English ability, and earnings levels than they are to California's other immigrants. Their educational and earnings levels are well below those of native-born workers even though their labor force participation is not.

In sum, the substantial differences among these four groups of immigrants underscore the diversity of California's foreign-born population. Indeed, depending upon which group one chooses to focus on, one might draw very different conclusions about the characteristics of immigrants and how they compare to those of the state's native-born residents.

DIFFERENCES WITHIN THE IMMIGRANT POPULATION: LEGAL STATUS

As we noted above, the influx of "new" immigrants to California is not the only factor that may be contributing to the public's negative perception of immigration. A majority of Californians also believe that illegal immigration is one of the state's major problems and backed up this belief by voting for Proposition 187. Backers of Proposition 187, no doubt, had a wide variety of reasons for their decision, but certainly one reason is the perception that illegal immigrants are different from other immigrants and thus affect the state in different ways.

Indeed, distinctions among the various legal categories are important for a variety of reasons. The rights and responsibilities of immigrants differ depending upon their legal status. Illegal immigrants, of course, are not entitled to be in the country or to work. Amnesty recipients, however, have a right to be in the country and to work but are prohibited from receiving various "means-tested" services and must demonstrate proficiency in English and some familiarity with the American government before they can acquire permanent status and move toward citizenship. Immigrants with full residency status have most of the rights of citizens but cannot vote or receive certain forms of public assistance. Refugees have all of the rights of permanent residence and are also eligible for certain types of public assistance to which other types of immigrants are not entitled. Once immigrants naturalize, they have all the rights of native-born citizens except the ability to serve as president.

These differences in legal status may in turn influence immigrants' behavior in ways that shape their effects on the state and thus how they are perceived by the public. The fugitive status of illegal/undocumented immigrants, for example, could well influence the kinds of jobs they are willing to take, their willingness to cooperate with public officials, and their use of public services, as well as the way they, in turn, are treated—e.g., the wages they can command in the marketplace. Although amnesty recipients are legally able to work, they are required to document proficiency in English if they are to become permanent resident aliens and eventually citizens. To the extent they use this training to improve their language and general educational skills, they may also improve their employment prospects and, if they become citizens, qualify for certain benefits to which they would otherwise not be entitled.

Unlike other immigrants, refugees are entitled to certain forms of public assistance and training that provides them with more options in their adjustment to American society. Indeed, after the Refugee Act of 1980, which established many of these special programs, was passed, a major debate ensued about whether refugees should be encouraged to seek employment promptly after entry in an effort to speed their transition to economic self-sufficiency rather than to take advantage of the various forms of training that were available to them. At the heart of this debate was the question, Which of these two alternatives would increase the refugees' assimilation into the social and economic life of the United States?

A final reason to be interested in differences among immigrants by legal status is that these statuses differ from an immigration policy perspective. U.S. immigration laws, for example, determine how many immigrants, and with what characteristics, will be admitted legally. However, different classes of immigrants are governed by different policies. There are, for example, several different categories under which legal immigrants may be admitted. Refugee and asylee[10] admissions are governed by a different set of regulations as is their eligibility for benefits after they arrive. Illegal/undocumented immigrants are generally divided into two categories, those who cross the border illegally and those who enter the country legally but become illegal aliens by violating the terms of their visas. While both are illegal aliens, in fact, government efforts to apprehend and deport these two groups are typically handled by different enforcement divisions of the INS—each with separate budgets and enforcement strategies. Additionally, while all immigrants who have received permanent residence status are technically eligible to become citizens, in fact, the degree to which the INS encourages naturalization has varied over time. In sum, because the different classes of immigrants are governed by different policies and regulations with respect to their admissions and treatment after arrival, it is important to understand how these groups differ (both in their characteristics and effects) to consider how changes in existing policies might affect the number, characteristics, and behavior of different groups of immigrants.

Despite its importance, an accurate and comprehensive profile of these different categories of immigrants is extremely difficult to construct. There are several reasons for this. First, an immigrant's legal status is not fixed after arrival but can change—indeed it can change several times. As we have already noted, some aliens enter the country legally but later become illegal by violating the terms of their visas. Moreover, illegal aliens can later be legalized either by general legislation (such as the 1986 IRCA law) or by an individual alien's applying for and being given legal status. Recent amnesty recipients were given temporary residence status which they were then required to convert into permanent status within two years. A refugee is also admitted in one status, but can later convert his or her status. In addition, once an individual has been given permanent residence status, he or she is then eligible to become a citizen—an option that many take. Second, the flow of migrants between the United States and the sending countries is not one way. Indeed, there have been periods (during the depression for example) when more immigrants left than arrived in the United States. Thus, when making estimates of the size and composition of various immigrant streams one must be mindful of the difference between gross and net flows.[11] This is particularly important when dealing with illegal migration, because a variety of studies suggests that a large proportion of the immigrants who enter the country eventually return to their homelands (McCarthy and Valdez, 1986, and Reyes, 1997).[12] Third, the principal data source used to describe the characteristics of immigrants (the U.S. Census) does not distinguish between the various categories of immigrants. Indeed, the only distinction the Census draws among the various legal statuses of the foreign-born population is between those who have naturalized and those who have not.[13] Thus, Census data do not distinguish between immigrants and temporary residents—much less between illegal, refugee, or permanent residents. Each of these factors complicates any attempt to describe how the characteristics of immigrants differ by legal status.

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[10] Refugees and asylees are distinguished in terms of where they seek entrance to the country. Refugees seek entry while still living abroad, while asylees seek permission to stay after they have already arrived in the country.

In the analysis that follows, we focus on the three legal-status categories of immigrants in California that Table 2.3 has demonstrated are overrepresented in the state: refugees, amnesty recipients, and illegal immigrants. Since the Census data only distinguish between naturalized citizens and all other foreign-born residents, we have used several different data sources and a variety of estimating procedures to estimate the characteristics of different legal statuses. Since, as will be demonstrated below, refugee admissions are concentrated among immigrants from Indochina and the former Soviet Union, we have classified all foreign-born residents from these countries who were counted in the 1990 Census as refugees.[14] Although the INS has issued several reports on the characteristics of immigrants who applied for and were given amnesty as a result of the IRCA legislation (U.S. Department of Justice, 1992; and Smith, Kramer, and Singer, 1996), the surveys on which these reports were based were administered only to those who received amnesty under Section 245A of IRCA.[15] However, the California Department of Education conducted a special survey of amnesty recipients in the state who attended English as a second language (ESL) training classes regardless of whether they qualified for amnesty as Pre-82s or Specialized Agricultural Workers (SAWs). Although the respondents to this survey were not a random sample of all amnesty recipients in California,[16] the Comprehensive Adult Student Assessment System (CASAS) data provide a basis for characterizing amnesty recipients in California. Illegals are the one group for which we lack any systematic data. However, since the CASAS data were drawn from a sample of formerly illegal residents, it is reasonable to assume that the amnesty recipients will generally resemble the illegal population. Of course, one obvious difference between amnesty recipients and immigrants who are currently living without documentation in the state is when they entered the country. By definition, all the Pre-82 amnesty recipients had to have been living in the country continuously since 1982. SAWs had to have entered the country before 1986.[17] Because the survey was conducted in 1989, the population of SAWs might be expected to be more similar to more recent illegal entrants than the population of pre-82s.[18] Correspondingly, we present our results separately for Pre-82s and SAWs.

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[11] Gross flows refer to the total number of migrants in one direction (or both directions combined). Net flows refer to the net change after taking account both the flow in and the flow out.

[12] The problem of estimating the characteristics of illegal aliens is further complicated by the fact that the chances an immigrant will later return to his or her host country are likely to be affected by the success he or she has in the United States.

[13] The Census is not alone in this practice. The Current Population Survey uses the same distinction, and most other data sources fail to make any legal distinctions among the foreign-born population.

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[14] An analysis of the originating countries of refugees from the California Department of Finance suggests that this assumption overestimates the number of refugees actually living in the state by approximately 5 percent.

[15] Section 245 of IRCA relates to those who have lived continuously in the United States since 1982, and these recipients are often referred to as "Pre-82s."

[16] The California survey (referred to as the CASAS survey) is more heavily weighted toward Mexicans and Central Americans than is the amnesty population in California as a whole. In addition, because it was drawn from attendees at ESL classes, one might surmise that it oversampled those who did not speak English well. However, the proportion of CASAS respondents who did not speak English well matches the proportion reported in the INS survey (Smith, Kramer, and Singer, 1996).

Our estimates of the size of the foreign-born population by legal-status category in California in 1995 were reported in Table 2.3. Here we focus on the socio-demographic and economic characteristics of these immigrants. In all cases, the population of refugees and amnesty recipients is compared with the total foreign-born population in 1990 as described from Census data.

Table 3.8 compares the national origins of these different groups. It is clear that refugees and amnesty recipients have a distinctive national origin profile. Seventy percent of the refugees who entered California between 1980 and 1995 came from Indochina, with Vietnamese immigrants constituting over 60 percent of this group.[19] The next-largest category of refugees came from Europe and consisted primarily of refugees from the former Soviet Union (about 80 percent of the European refugees). The only other country contributing more than 25,000 refugees was Iran.[20]

Over 95 percent of California's amnesty recipients (both Pre-82s and SAWs) arrived from Mexico or Central America, with Mexico contributing the lion's share of these immigrants.[21] Although the amnesty population in California contained a smattering of other nationalities, no other countries contributed a notable fraction.[22] Although we lack detailed data on the illegal population, Table 3.8 does include a recent estimate of the nationality of California's illegal alien population for comparison with the amnesty recipient figures. These estimates were made by Warren (1994) and describe the state's illegal population as of April 1992. According to him, 57 percent of California's illegal aliens were from Mexico, and another 25 percent were from Central America.[23] Although the sum of these two contingents (82 percent) is somewhat below the comparable total for the amnesty population (96 percent), it is clear that the vast majority of California's illegal and amnesty populations are Mexican and Central American. It is also true, however, that these two areas, Mexico, in particular, send a very large fraction of the legal immigrants to the state. Indeed, four times as many legal immigrants (from 1980 to 1990) came from Mexico to the United States as from any other country (INS, 1996b).

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[17] Of the total amnesty population in California, 59 percent qualified under the Pre-82 section of the Act (Sec 245A) and 41 percent under the SAW section (Sec 210) (Smith, Kramer and Singer, 1996).

[18] Of course, to the extent that the characteristics of more recent illegal immigrants have changed since 1989, then both the Pre-82 and SAW population will be less representative of current illegal immigrants.

[19] The remaining groups of Indochinese immigrants were from Laos (23 percent) and Cambodia (16 percent). These later two groups include large numbers of ethnic Laotians and Cambodians (California Department of Finance, 1996c).

[20] A little over 35,000 Iranians entered California as refugees during this period.

[21] As noted, the CASAS data upon which this estimate is based overrepresent Mexican and Central American immigrants. However, even the INS administrative data show that 93 percent of California's amnesty recipients came from these two areas (INS, 1996a).

Table 3.8

Distribution of Immigrants in California, by Region of Origin for Selected Immigration Categories

Origin	All Immigrants	1980–1995 Refugees	Amnesty Recipients	Illegal Aliens (Warren, 1994)
Europe/Canada	12.7	16.0	.3	5.1
Asia	24.9	9.1	1.2	8.9
Indochina	6.3	70.3	—	—
Mexico	37.9	—	87.4	57.1
Central America	8.5	1.4	8.9	25.2
Other	9.7	3.2	2.2	3.7
Total	100.0	100.0	100.0	100.0

SOURCE: All immigrants: U.S. Department of Commerce, *Public Use Sample*, 1990; refugees: California Department of Finance, 1994 and 1996c; amnesty recipients: CASAS, 1989, and U.S. Department of Labor, 1996; illegal aliens: Warren, 1994.

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[22] Although Mexican immigrants dominated the amnesty population overall, a substantial fraction of the amnesty population outside California was neither Mexican nor Central American.

[23] El Salvador, with slightly over 200,000 undocumented immigrants, contributed the second-largest contingent.

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Table 3.9 compares these various groups across a wide array of characteristics. These comparisons indicate that refugees and amnesty recipients (and by inference, illegal immigrants) are in many ways different from the balance of the state's foreign-born population. Refugees, for example, tend to be younger than other immigrants. They also have considerably less schooling on average and are less likely to speak English well. Perhaps, most strikingly, they are substantially less likely to be in the labor market, and when employed they are about half as likely to work 40 hours per week. However, when employed they earn only slightly less than other immigrants.[24]

Demographically, there is a significant difference between Pre-82s and SAWs, with the latter substantially younger than the former. SAWs are also dramatically more likely to be male—although this may simply be a reflection of the fact that most farm workers are male and not an indication of the gender ratio among the broader amnesty and illegal population. Both Pre-82s and SAWs have many fewer years of schooling and are the least likely to speak English well.

Table 3.9

Selected Characteristics of Immigrants, Refugees, and Amnesty Recipients, in California, 1990

		Amnesty Recipients		
	Refugees	Pre-1982	SAWS	Immigrants
Median Age	28.9	35.0	29.4	38.2
% < 18	28	1	5	13
% 65 +	6	0.3	0.4	9
Gender ratio	.98	.98	2.69	1.03
Median years of schooling	10.2	6.0	7.1	12.4
Speak English well (%)	42	33	24	67
Males in labor force (%)	62	84	82	89
Males worked 40 hrs/wk (%)	34	78	74	70
Weekly wage ($)	$278	$265-300	$219-250	$350

SOURCE: All immigrants and refugees: compiled from U.S. Department of Commerce, 1990 data; amnesty recipients: compiled from CASAS data, 1989.

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[24] One factor that may contribute to this low employment rate is that refugees are much more likely than other immigrants to rely on public assistance. Thirty percent of the refugee households in California in 1990 received some form of public assistance. The comparable figure for all immigrants was less than 5 percent.

Unlike refugees, however, they are very likely to be in the labor market and to be working 40 hours per week—indeed on both of these dimensions they closely resemble the immigrant population more generally. However, they appear, especially the SAWs, to earn somewhat less than other immigrants—perhaps as a result of their illegal status.[25] Because the vast majority of these amnesty recipients are Mexican, we compared the characteristics of Mexican amnesty recipients with all Mexican immigrants. In general, their age, educational levels, English skills, and labor force behavior were very similar. Amnesty recipients, however, did tend to earn somewhat less and were more likely to be working in agriculture and service industries and less likely to be employed in manufacturing or retail trades.[26]

Although definitive profiles of the different legal categories of immigrants cannot be drawn given the problems inherent in trying to create such profiles, it is clear that California's foreign-born population contains a disproportionate number of refugees, amnesty recipients, and undocumented immigrants when compared with the immigrants to other states. At least in California, refugees and amnesty recipients face some special problems in their efforts to adjust to California's society and economy. Specifically, their low levels of education and English language skills are likely to pose real hurdles to their upward economic mobility. Although this does not seem to have reduced the attachment of amnesty recipients to the labor market, it may well reduce their ability to get better jobs at higher pay.[27] Although refugees qualify for public assistance programs that other immigrants do not, it is unclear whether this has been a help or a hindrance to their labor market success. What is clear is that refugees in California have by far the lowest labor force participation rates of any group of immigrants. Finally, although we do not have any direct data on illegal/undocumented immigrants in

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[25] However, as Smith, Kramer, and Singer (1996) point out, this could also be a reflection of their poor education and English language skills.

[26] About 60 percent of the employed males (both Pre-82s and SAWs) were employed either in agriculture or services compared with about 30 percent of all Mexican immigrants.

[27] Although many amnesty recipients took language training subsequent to legalization, their self-assessed improvement in English speaking ability appeared to be minor. Moreover, the immigrants themselves identified this as a real handicap in their efforts to get better and higher-paying jobs (Smith , Kramer, and Singer, 1996).

California, the evidence we do have suggests that the vast majority of the state's illegal immigrants are Mexicans who enter the United States simply by crossing the countries' borders. Although similar in many respects to other Mexican immigrants, their low average levels of education and English speaking ability puts them at a real disadvantage in the labor market. Perhaps as a result of these handicaps, they are disproportionately concentrated in agriculture and service industries and at lower-wage levels when compared with other Mexican immigrants.

CONCLUSIONS

While public attitudes toward immigrants in California suggest that many of the state's residents feel at best a sense of unease about the impact of the new wave of immigrants to the state, in fact the image one has of the state's recent immigrants will depend upon which group of immigrants one is talking about. Whether sorted by national origin or legal status, California's foreign-born population appears to be quite diverse. There are, for example, striking differences among the population between European and most Asian immigrants, on the one hand, and Mexican, Central American, and Indochinese refugees on the other. The former are somewhat older, well educated, and generally earn as much, if not more than native-born residents. The latter are younger, not well educated, and face many more hurdles in the labor market. In addition to these differences among nationality groups, California's foreign-born population also contains a disproportionate share of three groups of immigrants (refugees, amnesty recipients, and illegal immigrants) who also face real handicaps in adjusting to the state and its labor markets. Although for some Californians the image of these illegal Mexicans and Indochinese refugees may come to mind when they think of the state's immigrant population, in fact the reality is much more complex. Because the conclusions one might draw about immigration and its effects will vary depending upon which groups of immigrants one is referring to, policymakers should be careful when thinking about California's immigrants to recognize the diversity within the state's foreign-born population.

Chapter Four

EFFECTS ON THE SOCIO-DEMOGRAPHIC PROFILE OF THE STATE

The profile of immigrants presented in the previous chapter highlighted differences within California's immigrant population by national origin and legal status, changes over time in the characteristics of that population, and how the state's foreign-born population differs from the native-born population. These differences are important not only to the public's perception of recent immigration but also for how they affect the state—the central focus of this report. In later chapters, we discuss the effects of immigration on the state's public and private sectors. In this chapter, we focus on how immigration has affected the socio-demographic profile of the state.

Although California's attraction for immigrants is not new, immigration has traditionally played a minor role in shaping the demographic profile of the state. Instead, migration from the rest of the country and births and deaths among state residents have been the driving forces behind changes in the size and composition of California's population. Indeed, until 1960, the foreign-born residents' share of California's population had steadily declined, from a high of 40 percent in 1860 to just under 10 percent in 1960.

All this started to change in 1960, when immigration to the state began to climb to unprecedented levels. Since 1970, immigration has become the central force in reshaping California's socio-demographic profile. This chapter documents the range of these changes, beginning with the size and distribution of the total population, moving on to the state's age and ethnicity profiles, and concluding with an examination of changes in the educational levels of the state's population.

EFFECTS ON GROWTH AND CONCENTRATION OF POPULATION

Demographic Change: Immigration and Population Growth

California's population has traditionally grown much faster than the rest of the country's. Since California entered the Union in the 1850s, its population has grown by 40 percent per decade—more than twice the rate for the nation as a whole. Since the end of World War II, however, the state's rate of growth has slowed—dropping to 18.6 percent during the 1970s. Although the growth rate picked up somewhat during the 1980s, it subsequently dropped to an all-time low during the first half of the 1990s.

In California, as in all states, growth is a product of three different demographic processes: natural increase (the difference between births and deaths), net migration (the difference between moves into and out of California from other states) and net immigration (the difference between moves into and out of California from abroad). Nationally, population growth has been slowing as natural increase has declined in the face of shifts in the age structure due to the maturation of the baby boom, delayed marriage, and declining fertility levels. While California's population has also felt the effects of these trends, the state's population growth has traditionally been less dependent upon natural increase than the nation's. Instead, California's growth has typically been driven by its attraction for newcomers—both immigrants and, even more important, migrants—from elsewhere in the United States.

The traditional importance of migration to California's growth can be seen more clearly in Table 4.1, which presents an historical profile of the state's growth since the turn of the century. The total change figure in the second column of the table reports the percentage change in the state's population by decade. The percentages reported in the next three columns represent the proportion of the total change that was attributable to changes during the decade in the number of residents who were born in California, in another state, and abroad, respectively. These changes reflect the influences of

Table 4.1

California's Population Growth, 1900–1995 (Total Change and Components of Change by Decade)

Decade	Percentage of Total Change			
	Total	California Born	Migrants	Foreign Born
1900–1910	60.1	27.2	48.2	24.6
1910–1920	44.1	34.7	49.0	16.3
1920–1930	65.7	29.7	56.3	14.0
1930–1940	21.7	48.2	63.9	–12.1
1940–1950	53.3	37.2	58.4	4.4
1950–1960	48.5	46.4	48.7	4.9
1960–1970	27.0	55.4	34.7	9.9
1970–1980	18.6	56.6	–5.7	49.1
1980–1990	25.7	50.3	2.4	47.3
1990–1995	7.7	88.2	–50.5	62.4

SOURCE: U.S. Department of Commerce, *Public Use Sample*, various years, as shown in table.

natural increase, net migration, and immigration.[1] Through the 1950s, the single most important reason for California's rapid growth was the state's ability to attract migrants from other states. Since 1970, however, about as many migrants have left as have entered California, a pattern that accelerated through the early 1990s.[2]

As the rate of migration to California has fallen off, California's growth has slowed but not stopped, because a rapid influx of immi-

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[1] The components of change listed in this table refer to changes in the stock of residents born in California, elsewhere in the United States, and outside the country during each decade. These measures do not correspond exactly to the traditional measures of natural increase, net migration, and net immigration. The traditional measure of natural increase, for example, includes deaths to immigrants and migrants after they arrive in the state; net migration includes immigrants who first arrive in another state and later move to California; and net immigration may include U.S. citizens who return to the state after living abroad. The changes in stock measures used here provide a better measure of the net influence of immigration on population growth in the state and will be very closely correlated with the more traditional measures.

[2] During the first half of the 1990s, the rate of out-migration from California actually increased. During the past two years, this outflow appears to have slowed and may have reversed in 1996. (See Center for Continuing Study of the California Economy, 1995; Gabriel, Mattey, and Wascher 1995; and Johnson and Lovelady, 1995.)

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grants has picked up the slack.[3] Throughout the first half of this century, immigration was of diminishing importance to the state's growth. It accounted for about one-quarter of the state's growth during the first decade of the 20th century and progressively less through the depression of the 1930s, when more immigrants left than entered the country. In the immediate post-war period, immigration accounted for less than 5 percent of the state's total growth. Since 1970, however, the number of immigrants entering the state has soared, and immigration has become the driving force behind the state's growth. This shift is portrayed graphically in Figure 4.1, which compares the growth of the state's total and foreign-born population. Although the growth of these two populations track each other fairly closely until 1960, the total population had grown considerably faster than the immigrant population. Since 1960, the rate of total population has dropped off, while the number of immigrants has climbed sharply. In essence then, California's population growth still depends upon its attraction to outsiders—only now those outsiders come from other countries rather than from other states.

Currently, natural increase accounts for the single largest share of the state's growth. This is largely a by-product of a dramatic increase in the number of women of childbearing age (itself a reflection of the aging of the cohorts born during the baby boom and the overall slowdown in growth) rather than an increase in fertility rates.[4] Immigration has, of course, contributed to this increase since natural increase indirectly includes the effects of immigrants because the children born to immigrants after they arrive are considered a component of natural increase.[5] If, in addition to its direct contribution to growth, immigration's indirect effect on growth through natural

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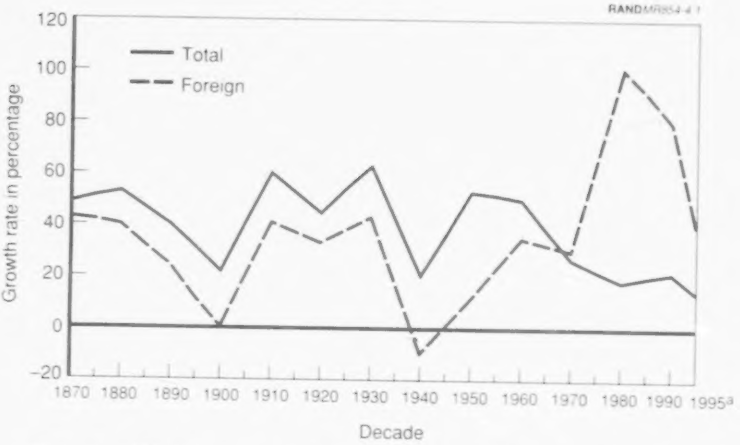
[3] The relationship between immigration and migration is discussed more fully in Chapter Seven.

[4] In fact, the overall number of births in the state increased more than two-thirds between 1970 and 1990. During the 1970s, this increase was due almost exclusively to a sharp rise in the number of women of childbearing age. During the 1980s, the continued increase in the number of women in the childbearing years was matched by an increase in fertility rates. Over the entire 20-year period, however, the general fertility rate was no higher at the end of the period than at the beginning, while the number of women in the childbearing years had increased by approximately 3 million (McClellan, 1996).

[5] Approximately 70 percent of the minor children living with an immigrant parent in 1990 were born in the United States. This proportion approaches 90 percent for chil-



[a]Ratios for 1990–1995 growth have been transformed into a 10-year ratio.

Figure 4.1—Growth of California's Total and Foreign-Born Population, by Decade, 1860–1995

increase were included, then immigration accounted for over 60 percent of California's population growth between 1980 and 1990.[6]

The Increasing Geographic Concentration of Immigrants

Although immigration has altered the overall profile of population growth in California, its effects have been felt unevenly because immigrants do not settle evenly across the state but tend, instead, to concentrate in certain regions. To demonstrate this effect, we have divided the state into seven separate regions. The regions vary sharply in population size, geographic location and contour, and

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dren under 10 years of age. Thus, the vast majority of the children of immigrants are born in this country. Looked at a different way, approximately 40 percent of all children under 10 in California were children of immigrants.

[6] Between 25 and 33 percent of the 4.3 million native-born children from birth to 4 years old in California in 1990 were the native-born children of recent immigrants.

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economic and social profiles. They are defined in terms of specific counties of the state and are pictured in Figure 4.2.[7]

The differential attraction of California's regions for recent immigrants is reflected in Table 4.2, which shows how the fraction of immigrants in each region's population has changed between 1960 and 1995. Although the distribution of immigrants across California's regions was never even, the geographic disparity has grown sharply over time. The range in shares, for example, has increased from 4.4–10.4 percent in 1960 to 5.8–37.9 percent in 1995. Most of this change, however, has occurred since 1970, when the new surge of immigration to the state began.

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[7] The seven regions are defined in terms of specific counties of the state. This scheme divides the state by its two consolidated metropolitan statistical areas (CMSAs)—(1) Los Angeles-Anaheim-Riverside and (2) San Francisco-Oakland-San Jose. Each of these regions is further subdivided into a core and fringe component. The balance of the state is then divided into a Northern, Central, and Southern portion—each including those counties in a particular area that are not included within the CMSA. The specific counties included in each region are listed below:

Northern and Mountains: This region includes the 27 California counties north of the greater Bay area and in the Sierras. These generally sparsely settled counties contained 4.4 percent of the state's population in 1960 and 4.9 percent in 1990.

Central Valley: This region consists of 12 counties in the San Joaquin Valley from Yolo County in the North to Kern County in the South. These predominately agricultural counties contained 11.3 percent of the state's population in 1960 and 14.5 percent in 1990.

San Francisco Bay Fringe: This region consists of the four counties (Napa, Sonoma, Solano, and Santa Cruz) in the outer ring of the San Francisco Bay area. They contained 2.7 percent of the state's population in 1960 and 3.6 percent in 1990.

San Francisco Bay Core: This region consists of San Francisco County and the five other counties at the core of the San Francisco Bay area (Marin, Alameda, Contra Costa, San Mateo, and Santa Clara). They contained 20.9 percent of California's population in 1960 and 17.4 percent in 1990.

Los Angeles Core: This region consists solely of Los Angeles County, the most populous county in the state and the heart of the state's manufacturing base. It contained 38.4 percent of the state's population in 1960 and 29.8 percent in 1990.

Los Angeles Fringe: This region consists of the four counties (Ventura, San Bernardino, Riverside, and Orange) surrounding Los Angeles county, which together with Los Angeles County compose the Los Angeles CMSA. They contained 10.9 percent of the state's population in 1960 and 19 percent in 1990.

Other Southern: This region consists of the four remaining counties in the southern half of the state (San Luis Obispo, Santa Barbara, San Diego, and Imperial). They contained 8.6 percent of the state's population in 1960 and 10.7 percent in 1990.

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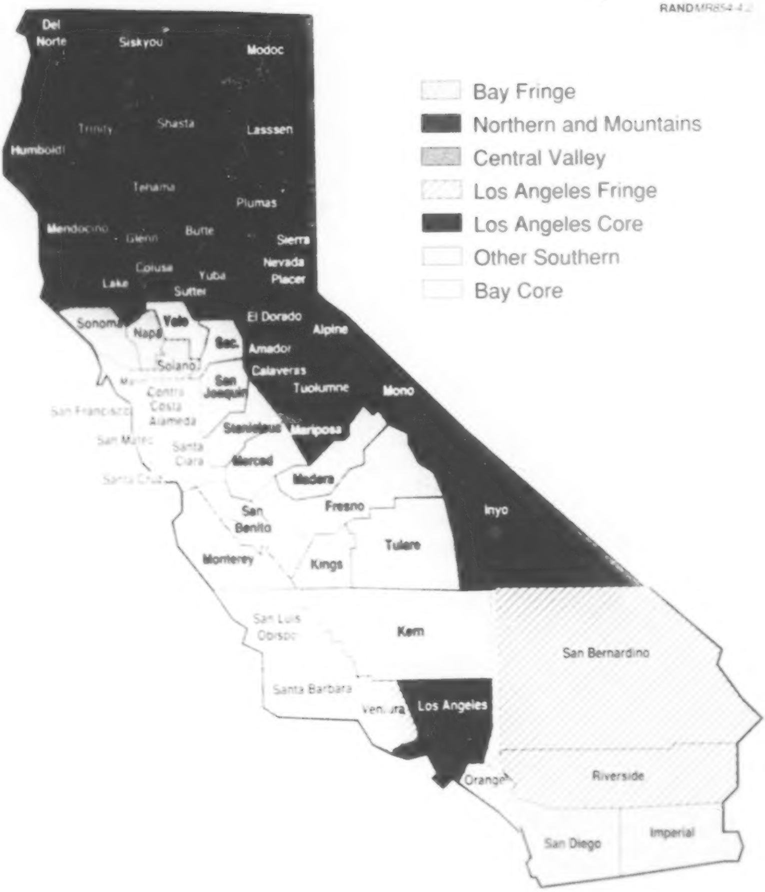
Bay Fringe
Northern and Mountains
Central Valley
Los Angeles Fringe
Los Angeles Core
Other Southern
Bay Core
Del Norte
Siskyou
Modoc
Trinity
Shasta
Lasssen
Humboldt
Tehama
Plumas
Mendocino
Glenn
Butte
Sierra
Colusa
Yuba
Nevada
Placer
Lake
Sutter
Sonoma
Napa
Yolo
Sac.
El Dorado
Alpine
Amador
Solano
Calaveras
Marin
San Joaquin
Tuolumne
Mono
Contra Costa
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
Inyo
San Benito
Tulare
Monterey
Kings
San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Orange
Riverside
San Diego
Imperial

Figure 4.2—Map of California

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Table 4.2

Immigrants' Share of Total Population, by Region of California, 1960–1995

Regions	1960	1970	1980	1990	1995
Northern and Mountains	4.4	3.6	4.5	5.6	5.8
Central Valley	6.9	6.3	10.5	14.9	16.0
Bay Fringe	7.5	6.0	9.0	11.7	12.6
Bay Core	10.4	10.2	15.1	21.7	24.7
Los Angeles Core	9.5	11.3	22.3	32.7	37.9
Los Angeles Fringe	6.4	6.1	11.4	18.5	19.9
Other Southern	7.4	7.2	12.6	16.9	18.5
Total	8.5	8.8	15.1	21.7	24.7

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960–1995, and California Department of Finance, 1996a.

Southern California and, in particular, the five-county Los Angeles region[8] have been particularly attractive to recent immigrants. For example, immigrants' share of the total population in these two regions almost quadrupled between 1960 and 1995. Indeed, the scale of change in Los Angeles County has truly been dramatic. In 1960, roughly one in ten county residents was an immigrant. By 1995, that ratio had climbed to almost two in five. In the process, Los Angeles County moved from rough parity with the San Francisco core area to a clear primacy as the region of the state most affected by immigration. In contrast, the change in the rest of the state has been much more modest, especially in the Northern and Mountain counties, where immigrants' share of the total population has increased less than 2 percentage points. These patterns have intensified during the 1990s—note, for example, that the cores of the state's two largest metropolitan areas (San Francisco and Los Angeles) have experienced the largest increases in immigrant shares.

Given immigration's importance to the overall growth of California since 1970, it is not surprising that immigrants have increased their share of total population in all regions. To obtain a clearer picture of the dynamic behind this change, Table 4.3 compares the rate of total population growth and the components of that growth across California's regions between 1970 and 1990 and 1990–1995, the periods of most rapid immigration to the state.[9]

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[8] The Los Angeles region includes Los Angeles, Orange, Ventura, Riverside, and San Bernardino counties.

The increasing share of foreign-born residents across all regions of the state has been produced by somewhat different demographic dynamics. Prior to 1990, in regions outside the two core metropolitan regions of Los Angeles and San Francisco, immigration was mainly a supplemental rather than the predominant growth factor. Immigrants in such regions, for example, contributed less than a third of the total population growth. Instead, a combination of natural increase and net in-migration among the native-born population drove the population growth process. In Los Angeles and San Francisco Counties, both of which experienced a net outflow of native-born migrants, a substantial influx of immigrants was the primary source of population growth. Indeed, the number of native-born

Table 4.3

Comparison of Population Growth by Region, 1970–1990 and 1990–1995 (in percentage)

	1970–1990			1990–1995		
		Change Due to Growth of:			Change Due to Growth of:	
Regions	Total Growth	Native Born	Foreign Born	Total Growth	Native Born	Foreign Born
Northern and Mountains	80.6	91.8	8.2	8.7	91.6	8.5
Central Valley	64.8	72.1	27.9	9.2	70.0	30.0
Bay Fringe	85.1	81.6	18.4	6.8	72.6	27.4
Bay Core	24.2	30.6	69.4	5.6	25.1	74.9
Los Angeles Core	93.0	68.2	31.8	9.8	64.1	35.9
Los Angeles Fringe	26.0	–15.0	115.0	5.1	–44.1	144.1
Other Southern	77.3	70.6	29.4	6.7	56.1	43.9
Total	49.1	52.1	47.9	7.8	37.6	62.4

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960–1995.

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[9] This comparison is essentially the same as that reported in Table 5.1 except that it combines the natural increase and net migration components into a single native-born–population figure. The entries in the native- and foreign-born categories represent the percentage of the total change due to changes in these populations.

residents in Los Angeles County actually decreased during this period, with the result that the county's 26 percent growth was due exclusively to immigration.

Since 1990, as more residents have left the state than entered, immigration's importance to continued population growth in California has increased. Almost two-thirds of the state's overall growth (7.8 percent) is a direct result of immigration. Moreover, the percentage of growth directly attributable to immigration has increased in all regions. The magnitude of that increase, however, differs sharply by region. In the rapidly growing Northern and Mountain region and the Central Valley region, immigration's contribution to growth has changed very slightly. In the fringe around Los Angeles and in the San Francisco area (both fringe and core), this growth has been larger. The most notable shift, however, has been in the Los Angeles Core and in the Other Southern region—where immigration's role has become even more marked. As suggested above, the key reason for this change has been the increase in out-migration from the state. Only two of the seven regions of California (the Northern and Mountains region and the San Francisco Fringe) experienced positive net migration during the first half of the decade. Moreover, the more sizable the out-migration from a region, the more important immigration is to the region's growth.

In sum, population growth in California (both overall and in most of the state's regions) has become increasingly driven by immigration. Immigration contributed less than half of the state's growth during the 1970s and 1980s, but it is directly responsible for almost two-thirds of the state's growth during the 1990s. This trend is particularly apparent in the core areas of the state's two largest metropolitan areas, Los Angeles and San Francisco, where immigrants constitute between one-quarter and one-third of the population and where immigration is the primary reason for these areas' continued growth. It is also evident, however, in many of the state's other regions. In these regions, the combination of a net outflow of native-born residents, which has slowed the overall pace of growth, and a continued influx of immigrants has made immigration an increasingly important component of total population growth. In the process, the foreign-born residents' share of the total population has climbed close to one quarter. Only in the Northern and Mountain region and

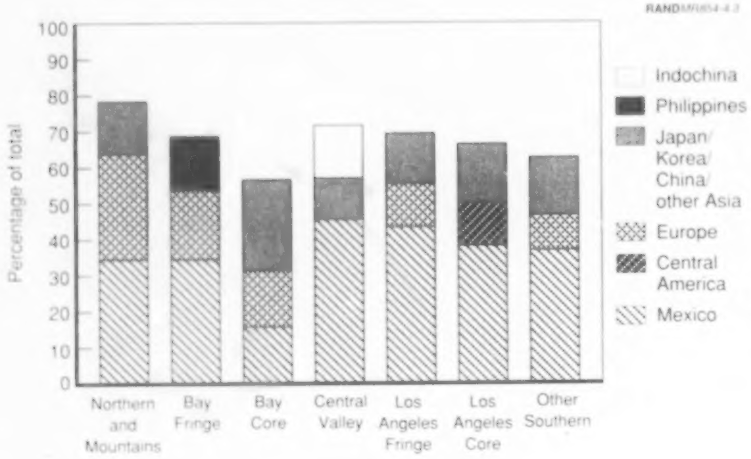

Figure 4.3—Origin of Foreign-Born Population, by Region of California, 1990

in the San Francisco Fringe—both of which continued to experience a net inflow of migrants during the 1990s and where immigrants' share of the total population is smallest—is immigration a less central factor in the growth process.

Just as immigrants' share of the total population and its growth varies by region, so does the mix of immigrants. This pattern is evident in Figure 4.3, which plots the three largest nationality groups' share of the total foreign-born population of California's various regions in 1990. Mexican immigrants, who represent almost two in five of the state's foreign-born residents, not surprisingly are the largest single nationality group in every region of the state except the core of the San Francisco Bay region—where the traditional Asian immigrant groups are in the plurality. However, besides this commonality, the composition of the foreign-born population varies, often quite sharply, by region. European-heritage immigrants, for example, represent a substantial share of the foreign-born population in the Northern and Mountains region of the state but a much smaller fraction of the population in Southern California and, most especially, in Los Angeles. In addition to a sizable Mexican population. Asian immigrants and, in particular, Indochinese, are overrepresented in the Central Valley. Central American immigrants are concentrated in Los Angeles County. When combined with Los Angeles' sizable Mexican-born population, they give the state's largest county (the home of over 40 percent of California's foreign-born residents) a distinctly Hispanic flavor.

EFFECTS ON CALIFORNIA'S AGE STRUCTURE AND ETHNIC COMPOSITION

The increasing importance immigration has assumed in the total size and growth of California's population and its various regions is not the only demographic influence it has exerted on the state's demographic profile. Immigration has also had pronounced effects on the state's racial/ethnic composition and its age structure.

Racial/Ethnic Composition[10]

Over the past 20 years, California's population—always somewhat more diverse than the nation's—has become far more so. This change, largely a result of immigration, is depicted in Figure 4.4, which compares the ethnic distribution of the U.S. and California populations between 1970 and 1994.

In 1970, close to 80 percent of the state's population was still non-Hispanic white—a very similar proportion to the nation as a whole. Between 1970 and 1994, however, non-Hispanic whites' share of the state's total population declined by over 20 percent—a much sharper drop than occurred in the nation. Although the state's other ethnic groups all increased their share of the total population, as they did nationwide, the majority of this increase was concentrated among the state's Asian and Hispanic residents. Asians, for example, tripled their share of the state's population (from 2.7 to 10 percent); and

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[10] The race/ethnicity measures used in this subsection refer to a combination of the Census-defined race and ethnicity categories. These categories are mutually exclusive and exhaustive and include non-Hispanic white, non-Hispanic black, Hispanic (of any race), Asian and Pacific Islander, and American Indian and other.

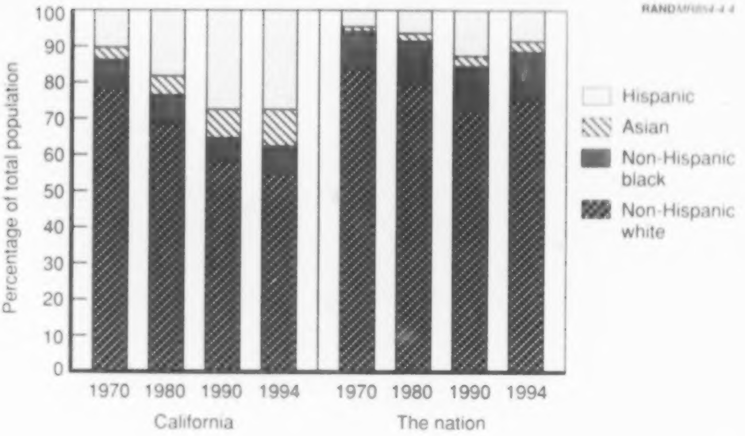

Figure 4.4—Ethnic Composition of California and the Nation, 1970–1994

Hispanics more than doubled their share (from 12 to 28 percent). Once again, these changes were much greater in California than they were in the nation as a whole.

These compositional shifts reflect the very different growth rates of California's ethnic groups—rates that, in turn, were directly affected by the patterns of migration and immigration described in Table 4.4.[11] The number of Anglo residents in the state, for example, increased by only 10 percent between 1970 and 1990—about one-fifth as rapidly as the state's total population. Indeed, the overall growth of the non-Hispanic white population was about 20 percent less than its rate of natural increase, a by-product of out-migration of non-Hispanic white residents from California to other states between 1970 and 1990.

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[11] Table 4.4 is based on decennial Census data—the most complete available to date. More recent projections of the ethnic composition of California can be found in California Department of Finance, 1997.

Table 4.4

Components of Population Change, by Ethnicity, in California, 1970–1990

	Rates of Change (percentage)			
Ethnicity	Total	Net Migration	Immigration	Natural Increase
Non-Hispanic white	9.9	–4.0	1.4	12.5
Black	64.7	19.3	4.9	40.5
Asian	395.0	27.1	283.9	84.8
Hispanic	203.8	4.9	111.4	87.5
Other	140.0	48.0	4.2	87.8
Total	49.1	–0.3	23.4	26.0

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970–1990.

While the state's black and other populations grew more rapidly than the non-Hispanic white population during this period—and unlike the non-Hispanic white population experienced positive net migration—the majority of that growth was due to natural increase. Immigration contributed very little to the growth of both of these groups.

The pattern of growth among the Asian and Hispanic populations was very different. These two groups grew very rapidly—the number of Asians increased nearly sixfold and the number of Hispanics more than tripled. The majority of this growth—and thus the major factor behind California's changing ethnic profile—was immigration. Over 70 percent of the growth among Asians and close to 55 percent of the growth among Hispanics was directly due to incoming immigrants. Moreover, the effects of these ethnic differences in migration and immigration patterns are compounded by the different rates of natural increase among ethnic groups. First, as noted above, a significant share of the natural increase among these two populations is indirectly attributable to immigration since it reflects births to new immigrants after they arrive. Second, the out-migration among non-Hispanic whites reduces their overall rate of natural increase because a significant share of the out-migrants are in their childbearing years.[12]

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[12] The fact that immigrants, in general, have higher rates of fertility than native-born residents also contributes to this pattern.

In sum, immigration has substantially altered the ethnic profile of California. Moreover, it appears to be propelling the state toward a situation where, in the near future, there will be no majority ethnic group in the state.[13]

Age Structure

California's age structure, like that of the nation, has been largely shaped over the past 40 years by the maturation of the "baby boom" generation. These cohorts, who were born between the late 1940s and the mid-1960s, have dominated both the state's and the nation's age profile in each decade. Thus, the age structure was heavily weighted by children and adolescents in the 1960s, adolescents and new labor force entrants in the 1970s, and young adults and mid-career workers in the 1980s and 1990s. However, the large influx of immigrants, most of whom enter the country before age 30, into California has moderated the baby boomers' impact on the state's age profile somewhat.[14] The baby boomers' impact on the state's and nation's age profiles as well as the impact of immigration on California's more recent age profile can been seen in Figure 4.5, which compares the state's and the nation's age structures in 1970 and 1990.

The age structures of California and the nation were virtually identical in 1970. In both cases, the dominant cohort in 1970 was children and adolescents between the age of 5 and 14. Twenty years later, those children were in their mid-twenties to mid-thirties and still

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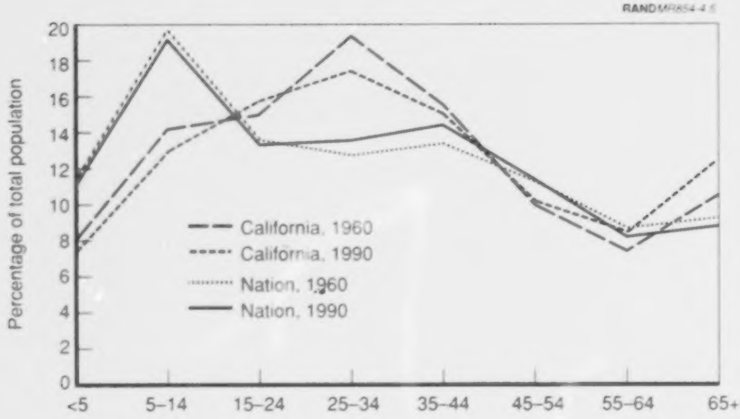
[13] Indeed, Los Angeles, the state's most populous county, has already reached this point. The most recent estimate of its racial/ethnic makeup indicates that Hispanics constitute 41 percent of the population, non-Hispanic whites 37 percent, non-Hispanic blacks 10 percent, and Asians 13 percent of the county's population.

[14] Overall, the median age of California's foreign-born population was actually 1.8 years higher (32.7 versus 30.9 years) than the native-born population's in 1990. This difference is a by-product of the fact that the foreign-born population contains fewer very young residents (those under 5) because most of the children of immigrants are born after the immigrants arrives in this country. The vast majority of recent immigrants arrive in this country between the age of 5 and 34 (see California Department of Finance, 1995). However, when the native-born children of immigrants are added to the foreign-born population, the median age of immigrants and their offspring is 6.4 years lower than that of the native-born population (27.2 versus 33.6 years).



SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

Figure 4.5—Age Distribution in California and the Nation, 1970–1990

formed the largest cohort in the age structure. However, the 25–34 age group is notably larger in California than elsewhere—a difference that is basically a result of immigration. In addition to compounding the size of the young-adult population, immigration has had two other effects on California's age structure. First, it has offset the decline in the number of children of native-born parents with children born to immigrants; and second, it has slowed somewhat the aging of the population, since the increase in native-born elderly is offset by the increase in foreign-born adults in their younger working years.

These impacts can be seen even more clearly in Figure 4.6, which plots the changes in the size of different age groups in California and the nation between 1970 and 1990. The total height of each bar represents the percentage change in each age group. This total change consists of change due to the native- and foreign-born populations at each age. The total population age 25–34, for example, increased by about 115 percent in California versus 75 percent in the nation as a whole. The number of native-born Californians age 25–34, however, was responsible for about 56 percent of this change (65/115), the re-

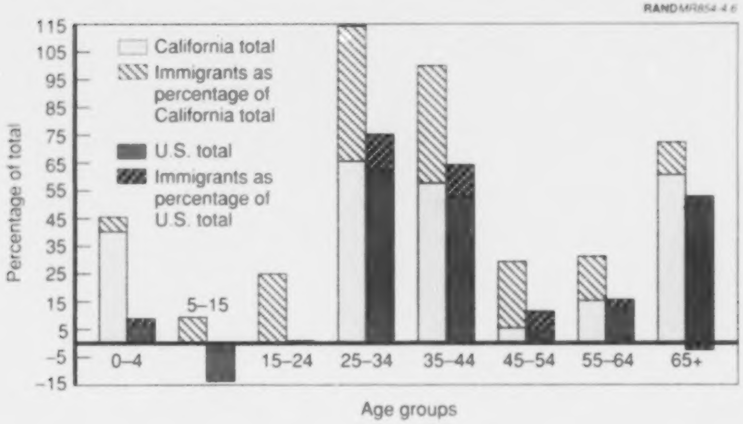


Figure 4.6—Percentage of Population Change by Age Group in the Nation and California, 1970–1990

maining 44 percent (50/115) was due to the increase in the number of foreign-born residents age 25–34. The 75 percent increase in the U.S. population 25–34, however, was due almost exclusively to an increase in the number of native-born residents 25–34 (64 out of a total 75 percent change). As such, Figure 4.6 shows how much of the total change in each age group is due to changes in immigrants versus native-born residents.

Since California's total population grew more than twice as fast as the U.S. population over this period, it is not surprising that each age group grew faster in California than in the country as a whole. What this figure makes clear, though, is that virtually all of that differential was due to immigrants. For example, a comparison of the solid portion of the bars (the percentage change in the native-born population by age) shows that the amount of change in California and the nation as a whole was very similar. California's greater overall growth (combining the solid and striped portions of the bars) is due primarily to differences in the amount of immigration.[15]

Although this effect is evident in every age group, immigration has had its largest percentage point impact on the baby boom cohorts (age 25–44). The age selectivity of immigration has compounded the basic age effects of the baby boom by adding close to half again as many young adults as might have occurred in the absence of immigration. Although smaller in absolute size, the group of immigrants has also had a notable effect on the growth of the state's younger population. The number of young children in California, for example, has grown almost 9 times faster than in the nation—largely a by-product of births to immigrants after they arrive. Moreover, the number of children and adolescents in the state continued to grow during this period—while it declined in the nation as a whole—and all of this growth was a result of immigration.

The net effect of immigration has been to make California's age distribution, which was virtually identical to that of the nation in 1960, decidedly younger by 1990. Specifically, the share of California's population in the late adolescent and young adult years (age 15–34) is fully 25 percent greater than in the nation as a whole.

Immigration is not only selective with respect to age (immigrants are generally younger than native-born residents), it is also selective with respect to ethnicity (a much higher fraction of California's recent immigrants are either Hispanic or Asian). In combination, these two effects have interacted to produce a rather distinctive age profile by ethnicity (see Figure 4.7). Specifically, while California's older population (ages 65+) has remained largely non-Hispanic white, its younger population has become progressively more Hispanic and Asian. These changes are particularly pronounced among the state's school-age and young-adult (labor-force-entrant) populations. Since the nature of the demand for public services often varies sharply by age and family status, the very different age structures of the state's ethnic groups will give the demand for public service a distinct ethnic flavor.

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[15] The one exception to this pattern is the much larger growth of the under-5 native-born population in California. This difference, however, is largely a by-product of the fact that immigrants have the majority of their children after they arrive in the country.

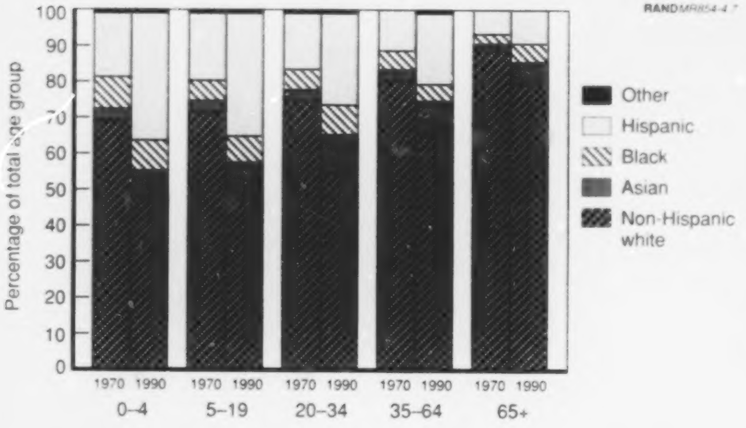

Figure 4.7—Distribution of Age Groups by Ethnicity, in California, 1970–1990

EFFECTS ON EDUCATIONAL PROFILE

At the same time that California's population was experiencing shifts in its ethnic and age structure, the average level of education of its population has been increasing dramatically. This change is particularly significant because education is probably the single most important predictor of the social and economic behavior of the population. Moreover, California's economy has traditionally benefited from the fact that its population has been better educated than that of the nation.

The dimensions of this improvement in educational levels is shown in Table 4.5, which compares the distribution of California's adult population (age 25 and above) between 1970 and 1990 as well as the changing share that immigrants constitute at each educational level. The picture that emerges from the changes in the total population is one of sweeping and consistent improvement. The most obvious example of this change is the dramatic shift in the share of the population at the two highest versus the two lowest educational levels. In

Table 4.5

California's Changing Educational Distribution, 1970–1990 (adults age 25 or more)

Years of Schooling	Total Population (%)			Immigrants' Share (%)		
	1970	1980	1990	1970	1980	1990
≤8	20.1	14.2	11.1	27.4	45.2	69.5
9–11	17.5	12.3	8.1	9.0	15.7	27.4
12	32.5	31.5	26.9	9.1	12.5	20.4
13–15	16.3	22.4	30.5	9.1	12.0	15.8
16+	13.6	19.6	23.3	9.3	14.6	19.5
Total	100.0	100.0	100.0	12.8	17.8	24.8

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970–1990.

1970, a higher fraction of California's adult population had less than a high school diploma than had attended college (38 versus 30 percent). By 1990, this ratio had reversed to the extent that the number of Californians with at least some college outnumbered those with less than a high school diploma by a ratio of almost 3 to 1 (54 versus 19 percent).

The scope of this change is truly dramatic. It is evident at every age and among all ethnic groups in the state.[16] However, the degree of improvement shows one marked difference—it was much greater for the native-born than for immigrants. The last three columns of Table 4.5 demonstrate this point by comparing the shares immigrants constituted of the total population at each educational level. In general, immigrants' share increased to a similar degree at all educational levels with one major exception: By far the sharpest increase occurred at the very lowest educational level (8 or fewer years of schooling). What this reflects, of course, is the fact that a much larger share of the immigrant than the native-born population has very low educational levels. Indeed, immigrants have increased from approximately one-quarter of the state's least-educated residents to over two-thirds during the past 20 years. In sum, despite the fact that educational levels have risen rather sharply among all groups of native-born residents and among many immigrants,[17] there has also been a very sharp increase in the number of immigrants with very low levels of education.

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[16] Among native-born males, for example, the median years of schooling among adults (age 25 and over) increased 8.5 percent for those 25–34, 16.5 percent for those 35–44, 16 percent among those 45–54, and 13.2 percent among those 55–64. Similarly, the improvement was experienced by all ethnic groups. The percentage increase among native-born males, for example, was 15.8 percent for non-Hispanic whites, 9.9 percent for blacks, 13.2 percent for Hispanics, and 20.9 percent for Asians.

Three factors have contributed to this changing educational picture. First, native-born Californians have been finishing high school and going on to postsecondary school at higher levels; second, the pattern of migration to California has become far more selective in terms of the average educational levels of migrants; and finally, the state has been attracting immigrants from abroad at all educational levels. The contribution of each of these factors to the changing educational profile of the state is examined in Table 4.6, which shows the percentage change in the number of California residents by educational level and place of birth.

The rising educational levels of California natives are reflected in the decline in the number with less than a high school diploma and the corresponding increase at the other educational levels. California

Table 4.6

The Changing Educational Composition of California's Adult Population, by Place of Birth, 1970–1990 (adults age 16 or more)

	Percentage Change by Place of Birth		
Years of Schooling	California	Other U.S. States	Abroad
<12	–28.7	–490.7	419.5
12	61.7	–18.7	57.0
13–15	46.9	32.6	20.6
16+	35.1	39.4	25.5

SOURCE: Tabulations from U.S. Department of Commerce, *Public Use Sample*, 1970 and 1990.

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[17] This increased disparity in the distribution of immigrants by education is illustrated by the fact that the median years of schooling increased from 10.7 in 1970 to 12.5 years in 1990, while the average years of schooling increased only from 10.4 to 10.8 years.

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has been losing migrants with low levels of education (especially those with less than a high school diploma), showing the selectivity of recent migration to the state. And it continues to attract better-educated migrants.[18] Since (as shown in Table 4.1) the overall level of migration to the state has been flat over the past 20 years, these data indicate that this result is a by-product of offsetting trends: a continuing ability to attract highly skilled migrants from other states at the same time the state has been losing less-well-educated migrants. In addition, the mixed effects of immigration on educational levels are reflected by the large influx of low-skill immigrants (whose numbers increased over fivefold), offsetting the out-migration of low-skill native-born workers at the same time as an influx of higher-skill immigrants has compounded similar increases among native Californians and migrants.

The net effect of these changes has been that Californians continue to have higher educational levels than their countrymen but the degree of their advantage has diminished. This pattern is shown in Figure 4.8, which compares the 1970 and 1990 educational distribution for California and the United States. The striped portion of each bar represents immigrants' share of the population at each educational level. Two points are clear when comparing the 1970 bars: first, California had fewer less-well-educated residents and more better-educated residents than the nation; second, although the overall level of immigration was higher in California than the nation, in no case did the presence of immigrants alter the basic differences between the state and the nation. By 1990, this picture had changed in two ways: first, the differences between California and the nation had generally shrunk; second, much of this reduction resulted from the growing importance of immigrants. For example, in 1970 about 21 percent of all California residents had an eighth grade education or less compared with 30 percent for the nation as a whole. By 1990, however, this percentage was somewhat higher in California than nationwide, but the higher level in the state was entirely attributable to immigrants. Indeed, because substantially fewer native-born residents in California (than in the nation) had low levels of education, the presence of a large immigrant population with low educa-

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[18] This point is developed further in Chapter Seven.

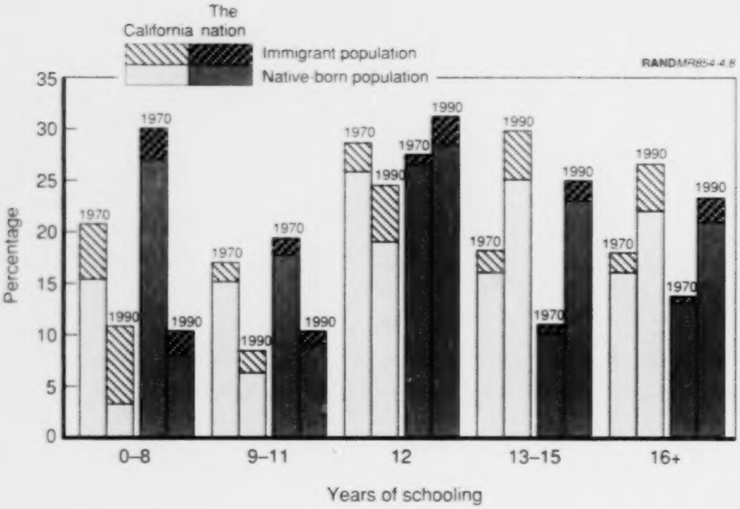

Figure 4.8—Educational Distribution of California and U.S. Men Age 25 or More, 1970 and 1990

tional levels (less than 12 years) in the state tended to equalize the percentage of the population with low educational levels. However, a higher percentage of both native- and foreign-born residents in the state (than in the nation) had 13 or more years of schooling. Thus, at lower levels of education, immigrants tended to reduce the differential between California and the U.S., while at higher educational levels, immigrants seem to increase California's educational advantage.

CONCLUSION

Although California has always had a special attraction for immigrants, prior to the recent surge in immigration to the state that began in 1970, immigration played a relatively minor role in determining both the size and composition of the state population. Since 1970, however, the traditional roles that migration from other states has played (traditionally the driving force behind the state's rapid growth), have been overtaken by immigration. As a result, immigra-

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tion is clearly the driving force behind the state's total population growth—accounting for close to two-thirds of that growth when the indirect effect of immigration (children born to immigrants) is added to the direct effect of immigrants themselves.

Immigration has affected the geographic and demographic profile of California's population. Although immigrants have settled throughout the state, Southern California—in particular, Los Angeles County—has become the principal area of settlement for most California immigrants. During the last 30 years, for example, the share of immigrants in the population of Los Angeles County has increased from 10 to 40 percent.

Immigration has also affected California's socio-demographic profile. In 1960, California's age structure was virtually identical to the nation's—now Californians are substantially younger than the U.S. population as a whole. Immigration is the major reason for this. Immigration has also made California's ethnic structure—traditionally more varied than the nation—even more so. Finally, Californians have traditionally received more schooling than their counterparts in the rest of the country. However, the surge of immigrants with low levels of education has substantially reduced that advantage and, in the process, transformed the low-education segment of the state's residents from a predominately native to a largely foreign-born population.

Chapter Five

INTEGRATION OF IMMIGRANTS[1]

A central issue in the current immigration policy debate is whether today's immigrants will be as successful in integrating into American society as their predecessors. This chapter focuses on this issue. It begins with a discussion of the traditional model of immigrant mobility—a model that highlights the intergenerational character of this process—and recent critiques of this model. Next, it presents evidence on the economic and educational progress of recent immigrants and their native-born offspring. It then summarizes the evidence on the social integration of immigrants and concludes with a summary of our findings.

The traditional model of immigrants' adjustment to American society emphasizes the multigenerational nature of this process (Gordon, 1964). Indeed, the model is sometimes described as a three-generation phenomenon in which the first generation seeks to learn English, become settled in the labor market, and provide its children with the educational background needed to succeed in American society. The native-born children of immigrants (the second generation) then learn English as their native language, acquire more education, and are socialized in both their parents' and American culture. The grandchildren of immigrants (the third generation) continue to improve their educational attainment, move up the economic ladder, become more fully socialized into American culture

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[1] This chapter relies on two published works that were part of this study: Schoeni, McCarthy, and Vernez, 1996, which describes the earnings and employment progress of adult immigrants; and Vernez and Abrahamse, 1996.

(often to the extent that they no longer maintain fluency in their grandparents' language) and become fully "Americanized."

In many ways, the key to this process is education. Since most of the immigrants who entered the United States in earlier waves of immigration lacked much formal education (most entered as adults), they began their careers in low-skill jobs. Although they made progress in adapting to American society by learning English and becoming familiar with the labor market, their possibilities for upward occupational mobility were limited—their wages may have increased but they were unlikely to qualify for highly skilled jobs. Their children, however, typically grew up with English as either their primary or secondary language and received their education in the United States. This opened the door for them to more highly skilled jobs and higher wages.

Recently, this model has been challenged on several grounds. Portes and Zhou (1993) suggest, for example, that this model fails to consider either the changing nature of the U.S. economy or the varying experience of different ethnic groups. It has been suggested that although some groups may follow the traditional model, others, constrained by low levels of education and an economy that offers fewer opportunities for those with few skills, may not be able to achieve the intergenerational upward mobility of earlier immigrants or may be limited to upward mobility only within their own ethnic enclave. The Portes and Zhou model stresses the importance of ethnic factors, particularly the distinction between European and non-European heritage groups, in explaining the pace and direction of assimilation.

A second critique also focuses on ethnic differences in the pace of immigrants' adjustment but emphasizes the very different starting points of today's immigrants. As we demonstrated in Chapter Three, some nationality groups arrive with a decided human capital advantage in terms of their higher educational levels, greater facility with English, and greater labor market experience. This advantage is manifest not only in comparisons with other, less-educated immigrant groups but also in comparisons with most of the native-born population. In essence then, they begin not at the bottom, but close to the top of the economic ladder. Those immigrants who lack these human-capital resources find the integration process more difficult, both for themselves and their children, in an economy that places much more importance on education and skill level than was true among earlier generations of immigrants.[2]

A third critique of the traditional model focuses more on historical factors and, in particular, on the sometimes overlooked fact that the integration of European-heritage immigrants earlier in this century was abetted because the mass immigration around the turn of the century—although large in scale—was relatively short in duration.[3] The cessation of the flows from the immigrants' homelands weakened the influence of their "native" cultures and gave their American-born children both the opportunity and incentive to become "Americanized." And the U. S. population was given time to "digest" the massive waves of immigrants.

Although none of these critiques challenges the intergenerational nature of the integration process, they all add refinements that suggest that the traditional model may be inadequate to explain the current and future prospects of today's immigrants. There is little question, for example, that there are enormous differences among today's new immigrants. These differences are likely to be all the more important in an economy that increasingly rewards workers with high levels of education and penalizes those without them. The extent of this change in the labor market is suggested by Figures 5.1 and 5.2, which compare changes in average employment and earnings levels between 1970 and 1990 for native-born California men.

Employment rates and earnings levels have increasingly diverged over this period. For example, employment rates among native-born men with less than 12 years of education declined over 20 percentage points during this period but barely at all among those with a college degree. Similarly, average weekly earnings declined by 12 percent for those with less than a high school diploma but increased by almost 5

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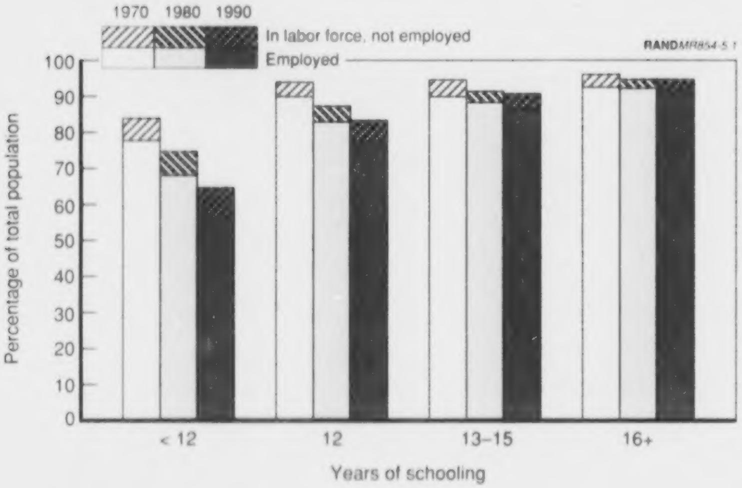
[2] This second model is described in Waldinger and Bozorgmehr (1996). A description of the difference in human-capital endowments among immigrant groups and its potential implications for the integration process in California can also be found in McCarthy and Valdez, 1986.

[3] In fact, as Waldinger and Bozorgmehr (1996) point out, the Europeans who arrived around the turn of the century actually came in two distinct waves. Immigration from Northern and Western European countries peaked in 1880, while that from Southern and Eastern Europe peaked around 1910.



SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

Figure 5.1—Labor Force Participation and Employment Rates Among Native-Born Men, Age 25–64, in California, 1970–1990

percent for those with a college degree.[4] Moreover, most projections of future labor demand forecast that this situation will intensify.[5] Thus, the upward mobility prospects of low- and high-skill immigrants may now be very different than they were in the past.

Similarly, to the extent that continued inflows of large numbers of immigrants from the same countries of origin reduce either the incentive or opportunity for immigrants and their offspring to integrate fully into American society, then ongoing immigration into California might impede the progress of those nationality groups that continue to come in large numbers. This possibility, of course, is more likely to occur for some groups than others. It may be particu-

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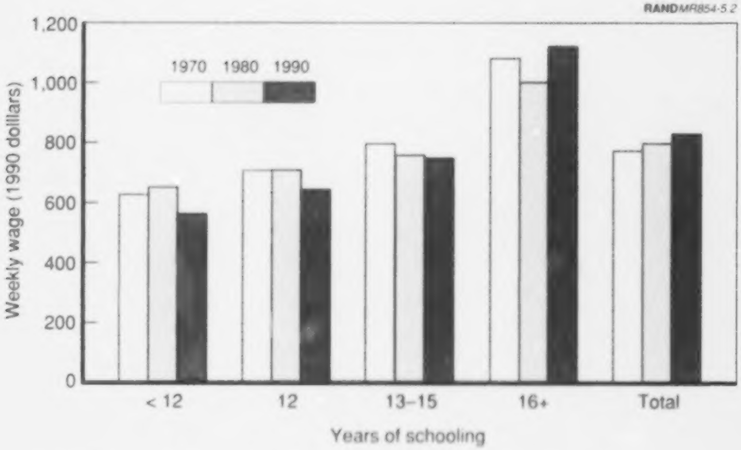
[4] Similar changes were observed at the national level.

[5] The divergence in economic conditions of workers is described in Karoly, 1996.



SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

Figure 5.2—Average Weekly Earnings of Native-Born Men, Age 25–64, in California, 1970–1990

larly likely for Mexican immigrants who combine a long history of immigration to the state, low average skill levels, and very large numbers of current immigrants.[6]

Integration may be further impeded because the process involves more than simply economic advancement. Indeed, economic and social/cultural integration tend to occur in parallel. As immigrants become established in the workplace and especially if their earnings increase, their dependence upon networks of friends, relatives, and the ethnically oriented stores and services that characterize ethnic neighborhoods declines. Often this transition is tied to immigrants leaving ethnically concentrated neighborhoods and moving, as their predecessors have done, from the ghettos and barrios to the suburbs. Coincident with their occupational advancement and geographic

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[6] About 46 percent of California's Mexican-heritage population was foreign born in 1990 and close to 66 percent of these immigrants entered the country in the preceding 10 years.

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mobility, their behavioral characteristics change as well. The importance of ethnically based associations declines, behavioral patterns (dating, marriage, and fertility) become more similar to those of native-born Americans, and their stakes and participation in the political process increase (McCarthy and Valdez, 1986). How rapidly this transition occurs varies depending upon their economic success, facility with English, and familiarity with American society. For some immigrants, particularly the more highly educated and more economically successful, the transition can be very rapid; for others it may take one or more generations. It may also depend upon whether the stock of existing immigrants is constantly replenished by new immigrants from the same countries of origin.

Whichever specific variant of the traditional integration model one chooses to support, there are reasons to believe that the integration process may not be proceeding either as uniformly or at the same pace as among earlier generations of immigrants. Moreover, it is clear that education will be increasingly important for the pace and extent of this process. Although immigrants have traditionally been known for hard work and enterprise, these trends raise the following questions: Are these characteristics alone as important now as they were in the past? Have formal education and communications skills become more important in determining the economic success of immigrants?

This chapter considers the evidence regarding these questions by looking at patterns of immigrants' economic and social mobility. It looks at the experience of the immigrants themselves, focusing on how well today's immigrants have done economically, both as a group and individually, over the past 30 years. Next, we discuss the foreign- and native-born children of immigrants, looking at their educational and economic progress. Then, we examine various measures of the social adjustment of immigrants and their children.

ECONOMIC PROGRESS OF ADULT IMMIGRANTS[7]

Although the pace of immigration has increased in the past two decades, the phenomenon of large numbers of immigrants facing the challenge of adapting to the labor market is hardly new. It is not surprising then that this phenomenon has drawn the attention of researchers. In a seminal work on this issue, Chiswick (1978) found that immigrants earn less than native-born workers when they first enter the country and the labor market but, as they pick up language skills and experience, they progress rapidly. After a little more than a decade, they reach earnings parity and eventually earn more than native-born workers.

More recent studies, however, have called these findings into question. While agreeing that immigrants' earnings improve with duration of residence, they find notable differences among immigrants by age at entry, whether the immigrants received their schooling in the United States, and by national origin. Some researchers (Borjas, 1994 and 1995) question whether the apparent improvement in successive cohorts of immigrants is more a by-product of a relative decline in educational levels among recent cohorts or the selective return of less-successful immigrants to their countries of origin. In sum, while prior research tends to document improvement in immigrants' earnings over time, it remains unclear whether all immigrants reach earnings convergence with native-born workers and why.

Moreover, as we demonstrated in Chapter Three, the overall decline in immigrants' average educational levels relative to those of the native-born population is a selective phenomenon. European-heritage and many Asian immigrant groups show marked educational gains, so that many of these immigrants are now better educated than the native-born population. Thus, we might expect the rate of economic progress to vary substantially across groups.

In this section, we focus on earnings and employment patterns among male immigrant workers and how they have compared with native-born workers' earnings over the past 30 years. We begin by comparing employment and earnings patterns among groups of native-born and immigrant workers and how these patterns changed in the aggregate between 1970 and 1990 in California. Next, we focus on how individual immigrants' earnings change over the course of their working lives. We then show the difference that a U.S. education makes in these lifetime earnings patterns.

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[7] A more complete description of this analysis and the methods upon which it is based is contained in a companion report (Schoeni, McCarthy, and Vernez, 1996).

Aggregate Employment and Earnings Patterns of Immigrant and Native-Born Men

The rate of labor force participation among prime-age males (25–64) in California has declined slightly over the past 30 years. Although participation rates among immigrant men have also declined, their dropoff has been slower. As a result, and despite consistently higher unemployment rates among immigrants, the aggregate rate of employment among immigrant men has remained equal with native-born men throughout this period (Table 5.1).

However, as we have indicated above, the labor market experiences of workers with different educational levels have tended to diverge, and, since immigrants differ in education, skill levels, and familiarity with English both among themselves and in comparison with native-born men, we might expect these differences to be reflected in the labor market experiences of immigrants. Correspondingly, we show in Table 5.2 how the employment status (labor force participation and employment) of the different national origin groups has changed in relationship to native-born men. Despite some differences among groups, immigrant men have consistently higher participation and employment rates than native-born men throughout this period. However, these differences are generally small and indicate, by and large, that the labor force patterns of immigrant and native-born men have remained roughly comparable throughout this 30-year period despite the different levels of education among these groups. The only exception to this pattern is among the Indochinese—whose labor force participation and employment rates lag substantially behind both those of other immigrants and those of native-born workers.[8]

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[8] As we demonstrated in Chapter Three, the vast majority of Indochinese immigrants in California are refugees who have much higher rates of public assistance than other immigrants. This pattern may contribute to this finding.

Table 5.1

Employment Status of Native-Born and Immigrant Men, Age 25–64, in California, 1970–1990

Employment Measure	1970	1980	1990
In labor force (native-born) (%)	91	88	87
Ratio, immigrant/native-born	1.00	1.01	1.02
Employment rate (native-born) (%)	87	84	83
Ratio, immigrant/native-born	1.00	1.00	1.00

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

Table 5.2

Employment Status of Immigrant Men by Region of Origin, in California, 1970–1990

	Labor Force Participation Ratio of Immigrant/Native-Born			Employment Rates Ratio of Immigrant/Native-Born		
Origin	1970	1980	1990	1970	1980	1990
United Kingdom/Canada	1.02	1.01	1.05	1.03	1.03	1.06
Europe	1.01	1.02	1.00	1.02	1.03	1.00
Japan/Korea/China	0.96	1.00	1.01	0.96	1.02	1.02
Philippines	1.00	1.06	1.08	1.00	1.07	1.09
Indochina	NA	0.76	0.81	NA	0.72	0.76
Other Asia	0.98	0.94	1.01	0.99	0.94	1.00
Mexico	0.99	1.04	1.05	0.97	1.01	1.00
Central America	1.00	1.04	1.06	0.96	1.02	1.01
Other	1.02	1.01	1.03	1.00	1.01	1.03

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970–1990.

NOTE: NA means not applicable.

There are greater disparities, however, between the earnings of immigrant and native-born men (Table 5.3). Overall, immigrants' earnings were 84 percent of those of native-born men in 1970 and had dropped to 72 percent by 1990.[9] This overall decline in the ratio

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[9] The comparable figures for the nation were 99 and 89 percent, respectively. This difference is primarily a product of the fact that native-born men in California earn sub-

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Table 5.3

Relative Earnings of Immigrant Men, by Region of Origin, in California, 1970–1990

	Ratio of Mean Earnings: Immigrant/Native-Born Workers		
Origin	1970	1980	1990
United Kingdom/Canada	1.06	1.12	1.21
Europe	1.03	1.10	1.11
Japan/Korea/China	0.72	0.86	0.98
Philippines	0.64	0.74	0.74
Indochina	NA	0.59	0.61
Other Asia	0.92	0.98	0.98
Mexico	0.60	0.58	0.50
Central America	0.74	0.60	0.49
Other	0.77	0.86	0.92
Total	0.84	0.80	0.72

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970–1990.

NOTE: NA means not applicable.

of immigrant to native-born workers' wages masks a much more complicated pattern among individual origin groups. As we noted in Chapter Three, California's immigrants can generally be grouped into four major categories that reflect the different characteristics of national origin groups.

Immigrants from the United Kingdom, Canada, and Europe have very high educational levels and considerably more fluency in English than other immigrants. As Table 5.3 shows, on average these immigrants earned more than native-born workers in 1970, and their relative position improved during the past 20 years. Immigrants from Asia, with the exception of Indochinese refugees, have similarly high educational levels but generally lack the English language skills of European-heritage immigrants when they first arrive in the country. In 1970, these Asian immigrants earned significantly less than natives—however, over the past two decades their earnings have climbed substantially, and by 1990 they were earning approximately

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stantially more than native-born workers nationwide. Immigrants in California earn approximately the same wages as immigrants nationwide.

the same amount as natives. Indochinese refugees have considerably lower educational levels than other Asians and much lower labor force participation rates. They also lack English language skills. These characteristics, combined with the fact that large numbers of Indochinese refugees only began immigrating to the United States in the last two decades, clearly affect their earnings levels—which have remained about 40 percent lower than those of natives.

The largest single group of immigrants in California are from Mexico and Central America. These immigrants have much lower levels of education and English proficiency than other immigrants. Moreover, a larger share of these immigrants enter the country illegally—a factor that earlier results suggest reduces their earnings potential. These immigrants earned, on average, about 40 percent less than native-born workers in 1970, and their relative earnings level has declined further over the past 20 years. In 1990, male immigrants from Mexico and Central America earned about 50 percent less than native males earned.[10]

In sum, while the average earnings of immigrants have declined almost 15 percent between 1970 and 1990, this decline is due to two developments during that period. First, immigrants from Mexico and Central America have markedly increased their share of the total immigrant population, and second, their wages have declined substantially relative to those of native-born workers. The average earnings of all other origin groups have actually increased relative to those of natives.

Indeed, the picture one draws of immigrants' economic performance over the past 20 years depends entirely on which group of immigrants one is describing. European-heritage immigrants have traditionally done very well relative to native-born workers and continue to do so. Asian immigrants, who historically have lagged behind natives, are now doing much better in the labor market and are generally at parity with natives. The one exception to this improvement is the Indochinese refugee population, whose wages continue to lag well behind those of natives. Mexican and Central American immigrants, who together constitute over half of California's immigrants, present a very different picture. Their wages, traditionally well below those of natives, have fallen even further behind over the past 30 years.

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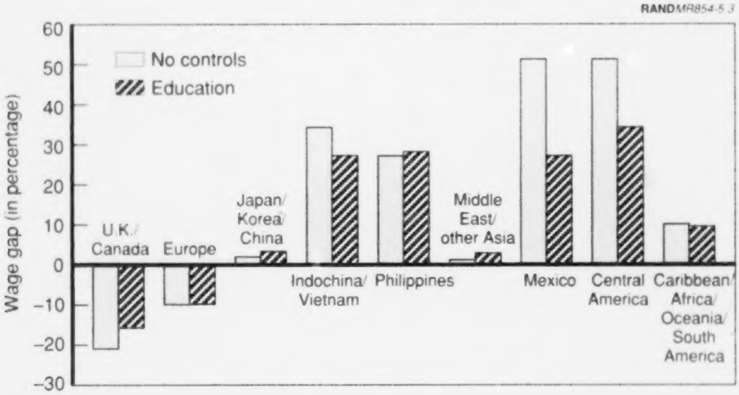
[10] The relative ordering by origin group and the pattern of change are similar at the national level. However, in general, immigrants' earnings relative to those of natives are somewhat higher outside California. (Schoeni, McCarthy, and Vernez, 1996). The difference is largely due to the fact that natives earn somewhat more in California than they do in the rest of the country.

In large part, although not exclusively, these differences in earnings are due to disparities in educational attainment (see Figure 5.3). In 1990, for example, after controlling for education, the earnings differences among origin groups shrink substantially. However, even after controlling for differences in average educational levels, the earnings of Filipinos and Indochinese, Mexican, and Central American men still remain more than 25 percent lower than those of native-born men.

Lifetime Earnings

Although the previous comparisons show how the average earnings of immigrants have changed relative to those of native-born workers,



SOURCE: Department of Commerce, *Public Use Sample*, 1970–1990.

Figure 5.3—Wage Gap Between Immigrant and Native-Born Workers, in California, by Region of Origin, With and Without Control for Education, 1990

they do not really examine the earnings progress of individuals because they lump all immigrants together regardless of their age, when they entered, their individual levels of education, or how much experience they have acquired in the U.S. labor market. A more appropriate comparison of immigrants' economic progress would take into account the fact that immigrants' earnings, like those of natives, change over the course of their working lives.

Ideally, to determine the degree to which immigrants' earnings change following their entry into the United States, we should have longitudinal data that enable us to trace the earnings histories of individual immigrants. However, such data do not currently exist. Therefore, we base our comparisons on a "cohort" method that enables us to compare the earnings history of groups of immigrants identified in terms of their age and the period when they entered the country.[11] Using this technique, we can compare the earnings histories of any particular cohort of immigrants by tracing their earnings histories over time. For example, focusing on those who immigrated between 1965 and 1969, we can compare the earnings of 25–34 year olds in 1970 with those who were 35–44 in 1980 and 45–54 in 1990. The earnings of these immigrants can then be compared with the earnings of native-born workers of comparable ages to determine whether there has been any change in the relative earnings of immigrants.[12] Using this technique, we are able to construct lifetime earnings profiles for all immigrants.[13]

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[11] This cohort method has been used extensively to examine the lifetime patterns of immigrants' earnings (see Baker and Benjamin, 1994; Borjas, 1985, 1993, and 1995; Friedberg, 1991; and LaLonde and Topel, 1992). There are limitations to this approach because the composition of a particular age-entry period "cohort" does not remain constant (some individuals return to their countries of origin or move to other states). To the extent that these "dropouts" differ from those who remain, e.g., they are more or less successful, it can bias our results. To the extent that we could test for this—by comparing the distribution of education within a particular cohort—we have done so and not found any significant bias.

[12] This cohort approach may underestimate the difference in earnings between natives and immigrants to the extent that there is substantial out-migration of less-successful immigrants over time.

[13] A more complete description of this technique and these results is contained in Schoeni, McCarthy, and Vernez, 1996. The following analyses are based on a multivariate model of earnings that controls for country of origin, age, educational level, and years of labor market experience.

The results of this analysis are portrayed in Figure 5.4, which compares the earnings progress of immigrants by origin group with that of native-born workers.[14] These results fill in the picture outlined in the earlier analysis: The lifetime earnings profiles of immigrants differ dramatically by country of origin. Immigrants from the United Kingdom, Canada, and Europe start out with earnings that are slightly lower than the earnings of natives, but, within 5 to 10 years, they earn just as much or more than natives. Mexicans and Central Americans, however, receive substantially lower earnings than natives at entry, and their earnings growth over time is slower—although somewhat higher for Central Americans than for Mexicans. As a result, the absolute wage gap between these immigrants and natives persists over the workers' careers. In fact, the absolute wage gap between Mexicans and natives actually increases as these immigrants age.

Filipino immigrants are much better educated than Mexicans, and their initial earnings are correspondingly higher. However, their earnings do not grow as fast as those of native-born workers, and, as a result, the earnings gap between them and natives actually increases at older ages. Immigrants from Japan, Korea, and China experience a very different wage pattern than other immigrants face. Upon arrival, they experience a substantial wage differential compared with that of natives. However, these immigrants have very rapid rates of wage growth following their entry into the labor market. Within 7 to 12 years, they have the same wages as natives do.

These lifetime comparisons show how immigrants' earnings vary over their working careers, but they do not distinguish the age at which immigrants enter the country. This distinction is important because the success that immigrants have in adjusting to the labor market could well vary depending upon whether they entered the country as adults or as children. Not only will immigrants who enter as children have spent their formative years in this country, they will also have spent all or a substantial fraction of their schooling in the United States. Table 5.4 shows how important it can be to an immigrant's economic progress to be educated in the United States.

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[14] Since the vast majority of Indochinese immigrants entered the country after 1970, they are excluded from this and the subsequent comparisons in this subsection.

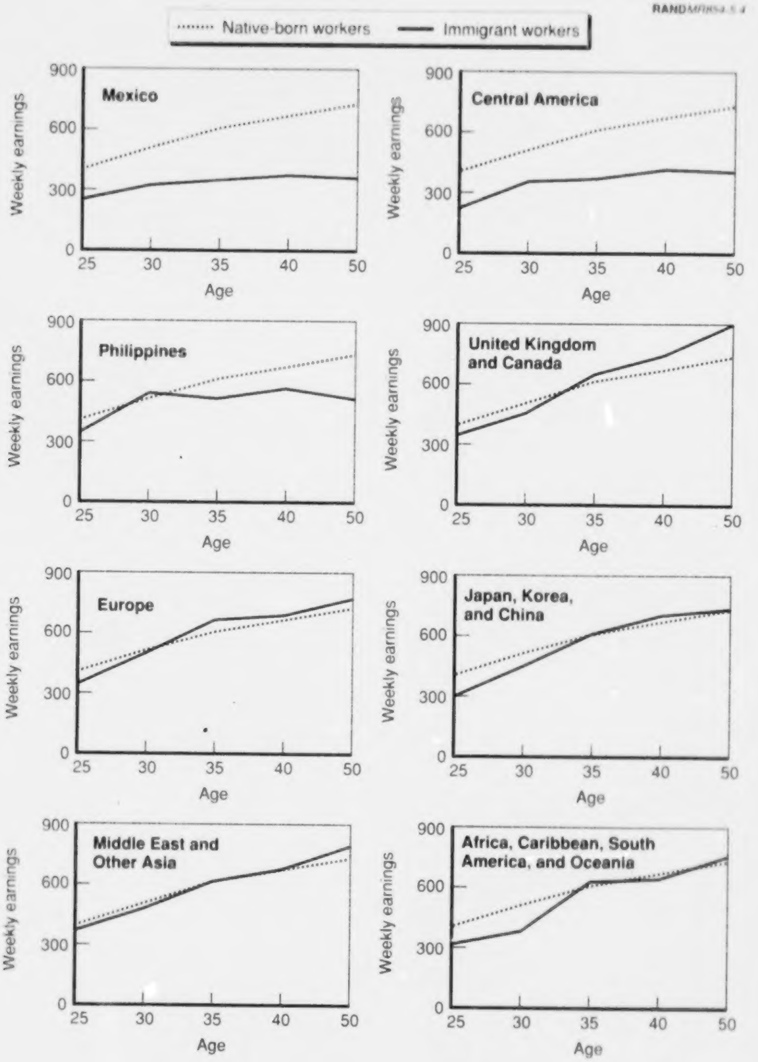

Figure 5.4—Lifetime Earnings Profiles of Immigrant and Native-Born Workers, in California, by Region of Origin

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Table 5.4

Years of Education, Earnings, and Age, by Country of Schooling, 1970–1990

	Years of Education		Weekly Earnings $		Average Age	
Origin	U.S.	Elsewhere	U.S.	Elsewhere	U.S.	Elsewhere
United Kingdom/ Canada	13.7	12.5	787	838	38.8	45.4
Europe	13.7	10.6	807	715	38.5	40.6
Japan/Korea/China	15.3	13.4	788	698	35.0	40.8
Philippines	14.1	13.5	666	618	32.8	36.4
Other Asia	15.5	14.0	868	770	34.3	40.1
Mexico	11.7	6.4	497	382	32.5	37.7
Central America	13.3	9.0	580	394	32.8	36.4
Other	14.2	11.8	706	587	33.9	41.6
Native-born workers	12.5		673		40.1	

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970–1990.

Not surprisingly, immigrants who have received schooling in the United States are between four and eight years younger than other immigrants, reflecting the fact that immigrants who enter the country as adults have generally completed their schooling before they immigrate. Despite their relative youth, however, immigrants educated in this country earn, on average, considerably more than immigrants who complete their schooling elsewhere. This difference is partly due to the fact that they have more schooling and partly to the difference in the quality of their education. For example, Mexican immigrants who complete their schooling in the United States have almost twice the years of schooling as immigrants educated in Mexico and are much more likely to speak English well (Lopez, 1996).

What difference does this make in their lifetime earnings and in the relative wage gap between them and native-born workers? To answer this question, we recalculated the lifetime earnings profile in Figure 5.5[15] separately for immigrants educated in the United

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[15] These results are based on the same general earnings model used to produce the results in Figure 4.4, but they also include a variable that measures the age at which immigrants entered the country.

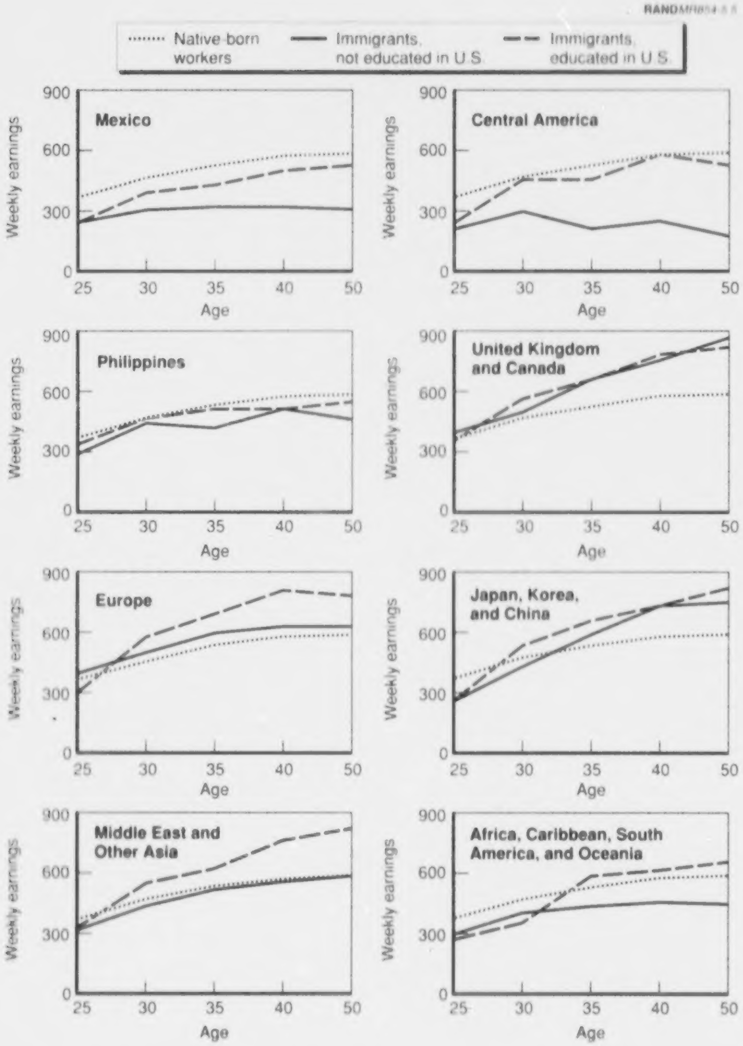

Figure 5.5—Lifetime Earnings Profiles by Region of Education (for the nation as a whole)

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States and for those educated elsewhere.[16] This comparison suggests the importance of education for the successful economic progress of immigrants by showing that the earnings gaps between immigrants and natives presented in Figure 5.4 are reduced substantially—this reduction is particularly pronounced for Mexican and Central American immigrants, who generally have the lowest average educational levels.

These results support the notion that the economic progress of immigrants after their arrival in the United States is not uniform. Although virtually all groups of immigrants demonstrate a strong attachment to the labor market, those groups who enter with higher levels of education clearly make faster economic progress than those who do not. Thus, as suggested by the critiques of the traditional assimilation model, the rate of economic progress differs among groups, depending upon their educational level. The higher the educational level of immigrants, the more rapid their earnings growth and the faster they approach earnings parity with native-born workers. At the other end of the spectrum, immigrant groups with lower levels of education, for example, Mexican and Central American immigrants, are not only at a disadvantage when they enter the California labor market, that gap grows because they experience slower earnings growth over the course of their working careers. Both of these differentials decline substantially, however, if the immigrants enter at a young enough age to obtain schooling in the United States.

EDUCATIONAL PROGRESS OF IMMIGRANTS' CHILDREN[17]

The previous section compares the labor market experience of adult immigrants after they have completed their schooling. In addition to demonstrating the importance of education to immigrants' lifetime earnings profiles, it also suggests that how much schooling immigrants receive in the United States can make a significant difference in their subsequent economic progress. Since the majority of immigrants enter the country in their 20s, after they have completed their schooling, it is important to focus on how educational progress differs between native- and foreign-born school age children.

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[16] Unlike the comparisons in Figure 5.4, those in Figure 5.5 are calculated for the country as a whole. This procedure is necessary because of sample size considerations.

[17] This analysis is based on a separate study conducted for this research (Vernez and Abrahamse, 1996).

Table 5.5 compares school enrollment rates of school-age immigrant and native-born children in California in 1980 and 1990 to determine whether immigrants who enter the United States as children progress through the school system in parallel with native-born children.[18] Up to age 15, immigrants and natives have roughly similar rates of school participation, but the rates diverge after this age—with immigrants significantly less likely to be in school at age 15–17.

Table 5.6 presents a more detailed view of school enrollment patterns in the critical 15 to 17 year age group by comparing rates of school participation by ethnic status for native-born and immigrant youth in California. These data make clear that virtually the entire difference in enrollment rates between natives and immigrants is due to the lower participation rates of Mexican immigrants. By age 15, the school participation rates of Mexican-born youth already lag

Table 5.5

In-School Participation Rates, by Age and Immigration Status, in California, 1980–1990

	1980		1990	
Age	Native Born	Immigrant	Native Born	Immigrant
5–7	93	89	86	81
8–11	99	97	96	92
12–14	99	97	97	94
15–17	92	80	94	84

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970–1990.

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[18] This analysis examines only school enrollment rates by age, it does not attempt to determine whether foreign- and native-born children are at the same grade levels at particular ages.

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Table 5.6

In-School Participation Rates of Youths, Age 15–17, by Immigration Status and Ethnicity, in California, 1990

	Native-Born Youth			Immigrant Youth		
Ethnicity	15	16	17	15	16	17
Japan/Korea/China/ Philippines	96	97	97	98	95	93
Other Asia	98	94	92	95	95	95
Black	94	92	88	95	95	91
Mexican	95	94	88	85	77	62
Other Hispanic	96	96	89	92	89	82
Non-Hispanic white	96	95	92	96	94	92
All	96	95	91	91	86	77

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1980–1990.

well behind those of all other groups, and this difference increases with age. The same pattern is also observed among other Hispanic immigrants although in a less dramatic fashion. This decline in enrollment rates is no doubt due in part to Mexican-born students dropping out of school as they reach working age. However, since many Mexican youth may be arriving in the country in their midteens, it may also be a by-product, as Vernez and Abrahamse (1996) suggest, to their never having enrolled in school in the first place. Given the low average years of schooling in Mexico, many Mexican youth who enter the United States as immigrants at age 15 or older may already have been out of school in Mexico for at least two years and choose not to resume their schooling after they immigrate, either because they are unable to catch up with others their age or because of economic necessity.

The growing divergence in labor market outcomes by education that is documented in prior sections suggests that the most critical stage in an individual's educational career comes at the end of high school. Those individuals who go on to postsecondary schooling and especially those who enter and graduate from college currently enjoy a decided labor market advantage over those who do not. Moreover, this advantage seems to be increasing. Table 5.7 compares the in-school participation rates of native-born and immigrant youth in the critical 18- to 21-year-old age period when postsecondary school de-

Table 5.7

In-School Participation Rates of 18- to 21-Year-Old High School Graduates, by Immigration Status and Ethnicity, in the Nation, 1980–1990

	1980		1990	
Ethnicity	Native	Immigrant	Native	Immigrant
Japan/Korea/China/ Philippines	70	71	77	82
Other Asia	40	65	67	83
Black	40	57	50	66
Mexican	35	33	53	44
Other Hispanic	42	57	56	58
Non-Hispanic white	43	54	56	58
All	43	55	57	65

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1980–1990.

cisions are made. Several points are noteworthy about these results. First, in general, immigrants are more likely than native-born youths to pursue some kind of postsecondary schooling. This is true for both 1980 and 1990 and for every ethnic group but one: Mexicans. Second, the highest participation rates are found among the Asian groups (both immigrant and natives of Asian heritage)—one factor that no doubt has contributed to the rapid earnings progress among Asians that was demonstrated above. Third, school enrollment rates have risen for all groups over the last decade. The increases among Mexican natives and immigrants are especially noteworthy in this context. However, despite this progress, Mexican immigrants still lag significantly behind both other immigrants and natives.

The option to go on to postsecondary training after high school depends, of course, upon the preparation and performance of students in primary and secondary school. As noted above, since many Mexican immigrants never enter the school system, or fail to complete their secondary schooling, their educational and, thus, economic options are limited. Other immigrants, however, seem better prepared for college than native-born youth, regardless of ethnicity. Looking at a national sample of high school sophomores and seniors, we found, for example, that immigrants were more likely to follow an academic track, to take advanced courses in math and science, to take the Scholastic Achievement Test or the American College Test, and to plan to go to college and work hard to achieve their expectations (Vernez and Abrahamse, 1996).

In sum, these educational comparisons present a mixed picture with regard to the educational progress of immigrants. On the one hand, Asian and European-heritage immigrants seem to perform very well in school after they arrive—indeed, in many cases their performance exceeds that of native-born youth. On the other hand, the educational picture for Hispanic immigrants, especially those from Mexico, is much less positive. Mexican immigrant children are not only less likely to continue their schooling after high school, they are also less likely to obtain a high school diploma. Among the many factors that contribute to this lower educational performance are the low income and educational level of the immigrant parents. However, the picture for native-born Mexican Americans is somewhat more hopeful. Their in-school participation rates are comparable to other native-born groups—although still somewhat below the average—throughout high school.

THE EDUCATIONAL AND ECONOMIC PROGRESS OF FIRST AND SUBSEQUENT GENERATIONS

The process by which immigrants adjust to American society is gradual. Every new group of immigrants, especially those who differ most notably from the native-born population, has historically been regarded as different and has been viewed by some as incapable of integrating into American society. Thus, groups that today are regarded as typically American, e.g., the Irish, Italians, and Eastern Europeans, were once viewed as distinctly "un-American." This transformation did not occur overnight but instead took several generations. Similarly, the question of how well today's immigrants are adapting to American society cannot be judged exclusively by the progress of first-generation immigrants. Instead, we must also examine how the progress of first-generation immigrants compares with their native-born, second-generation offspring.

Optimally, to make such comparisons, we would like to have information on the generation of each individual. However, the primary data source available to make comparisons between immigrants and native-born residents, the decennial U.S. Census, does not contain information that allows us to distinguish between first, second, and subsequent generations.[19] Correspondingly, in the comparisons that follow, we compare native- and foreign-born individuals age 25 to 34 by ethnicity, focusing on those ethnic groups that are the most recent arrivals in the country. While these comparisons do not allow us to differentiate between second and subsequent generations, they do allow us to determine how the educational and earnings progress of native-born individuals compare with immigrants themselves. Since large-scale immigration from most of the country groups highlighted in these comparisons occurred subsequent to enactment of the 1965 Immigration and Nationality Act, the majority of the native-born population for Asians and Hispanics compared here are likely to be second-generation immigrants who entered the country prior to these changes in policy.[20]

Educational Progress

The evidence in the prior section suggests that, at least among recent cohorts, the native-born offspring of prior immigrants have been making significant educational progress relative to their parents. Indeed, these tables show that Asian Americans, both native and foreign born, outperform both immigrants and natives of European (non-Hispanic white) heritage. Although natives of Hispanic origin, especially Mexican Americans, still lag, they have made considerable educational progress during the past decade.

These earlier comparisons, however, consider only participation rates among those currently of school age, albeit of new cohorts of immigrants, and thus do not reflect final educational attainment. Here, we look at educational levels among those who have, by and large, completed their schooling and how these levels have changed over time between the first and subsequent generations. This comparison is presented in Table 5.8, which reports the proportion of individuals who have completed at least 13 years of school (some postsecondary education)[21] among the native-born population and immigrants, by ethnicity. Rather than include all adults in this com-

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[19] The Census did include data on parents' place of birth in 1960 and 1970 for all respondents. However, those questions were not included in 1980 or 1990. Although it is still possible to identify parents' place of birth for children living with their parents in 1980 and 1990, the focus in this subsection is on adults—very few of whom are still living with their parents.

[20] Since the most recent of these cohorts was born between 1954 and 1965, they are not the adult children of the latest (post-1965) immigrants. The vast majority of the native-born children of these latest immigrants have not yet completed their schooling. An estimate of the proportion of various nationality groups by generation is presented in Waldinger and Bozorgmehr (1996) p. 22.

Table 5.8

Postsecondary Schooling Among Immigrant and Native-Born Adults, Age 25–34, by Region of Origin, in California, 1970–1990

	Percentage With at Least 13 Years of Schooling			
Region of Origin	1970	1980	1990	% Change
All Groups				
Native-born adults	46	62	62	35
Immigrant adults	41	40	38	−7
Non-Hispanic white				
Native-born adults	50	66	66	32
Immigrant adults	54	67	71	32
Japan/Korea/China				
Native-born adults	78	88	89	14
Immigrant adults	71	72	76	7
Philippines				
Native-born adults	37	59	72	95
Immigrant adults	54	69	74	37
Other Asian				
Native-born adults	NA	36	57	58
Immigrant adults	NA	70	64	−9
Mexico				
Native born adults	21	39	41	95
Immigrant adults	8	12	16	100
Other Latin				
Native-born adults	27	53	58	115
Immigrant adults	48	37	33	−31

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970–1990.

NOTE: NA means not applicable.

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[21] Although the actual percentages are lower, the patterns are the same when the percentage with a college degree is used.

parison, we limit it to individuals age 25–34, since they will have completed their schooling in the prior decade.[22]

Throughout this period, the educational level of native-born residents has generally exceeded that of immigrants.[23] Indeed, this differential has consistently increased as the proportion of natives with postsecondary schooling has climbed by over a third, while the proportion of immigrants has actually declined. Although many of these immigrants were educated abroad, whereas all of the natives were educated in this country, this pattern reflects the sharp increase in schooling levels among natives and the changing composition of California's immigrant population.[24] Correspondingly, we focus our discussion on the differences between natives and immigrants within each particular ethnic category.

The differences between first and subsequent generations in this table varies across groups. In each decade, those of Japanese, Korean, and Chinese heritage, as well as Mexican and other Latin heritage, have outpaced the educational levels of the first generation. The reverse is true, however, of Filipinos and other Asians. Thus, the expected educational progress across generations is observed for some but not all origin groups. This, of course, is consistent with the notion that the rate of intergenerational progress differs across nationality groups. With the exception of non-Hispanic whites (those of European heritage), the second-generation cohorts who completed their schooling more recently have made substantial progress over those who completed their education 20 years ago. Particularly noteworthy in this respect is the improvement of those of Filipino, Mexican, and other Latin descent—for whom the proportion of individuals with postsecondary schooling has close to doubled. Indeed, the progress among those of other Latin descent stands in stark contrast to the pattern of change among immigrants for whom the proportion with postsecondary training declined by one-third.[25]

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[22] Since we know that average educational levels have changed dramatically during the past 30 years, this measure is preferable to using the total adult population for this comparison. Such a broader-based comparison would confound differences in schooling levels and age structure across groups.

[23] The ethnicity of native-born residents was determined using the race, Spanish origin, and nationality items in the Census.

[24] As noted in Chapter Four, educational levels of natives have improved dramatically over this period. At the same time, the proportion of immigrants from countries where the average level of education is lower has climbed.

Despite this improvement, however, the proportion of Mexican Americans with a postsecondary education remains low. Moreover, since prior research has demonstrated the importance of parental schooling on children's educational attainment[26] and an earlier chapter has documented the low average educational level of Mexican immigrants, the educational gap between Mexican Americans and California's other native-born residents will not be closed in one generation.

This comparison does raise one central question. Given the very low levels of education among Mexican immigrants, the continued inflow of large numbers of Mexican immigrants to California, and the fact that it may take at least two (or more) generations for Mexican Americans to make up the educational gap between themselves and other native-born residents, what might the consequences be for California and its economy?

Education and Career Earnings

This question is particularly important given the increasing importance of education to the economic success of workers in today's economy. If the average educational levels of Mexican-heritage and other Hispanic workers continue to trail behind those of other workers, they will be at a decided disadvantage relative to others. Persistent low levels of education lead to low entry-level wages and slow wage growth throughout their careers.

These effects are demonstrated in Table 5.9, which shows how the average wages of the cohort of workers who were 25–34 in 1970 changed between 1970 and 1990. As in the earlier cohort analysis, we are following the wage history of a cohort of workers over time, e.g.,

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[25] In all likelihood, this drop is a result of a shift in the composition of other Latin immigrants from South Americans, whose educational levels are reasonably high, to Central Americans, whose educational levels are much lower.

[26] See Blau and Duncan (1967); Duncan, Featherman, and Duncan (1972); Grismer et al. (1994); and Vernez and Abrahamse (1996).

Table 5.9

Career Earnings Growth Among Workers Age 25–34 in 1970, by Educational Level and Immigration Status, 1970–1990 (in 1989 dollars)

	Native-Born Workers			Immigrant Workers		
	Ratio to 1970 Earnings		1970–1990 Earnings Growth	Ratio to 1970 Earnings		1970–1990 Earnings Growth
	1970	1990		1970	1990	
<12	0.86	0.97	13.1	0.70	0.68	–0.3
12	0.93	1.16	23.8	0.90	1.03	14.5
13–15	1.00	1.36	35.7	0.97	1.20	23.2
16+	1.22	2.09	71.9	1.05	1.73	64.5

SOURCE: Tabulations based on U.S. Department of Commerce Census, 1970, 1980, 1990.

they were 25–34 in 1970 and 45–54 in 1990. The table lists the average wage at different levels of education, expressed as a ratio of the average wage for all 25 to 34-year-old native-born workers in 1970. Thus, all of the entries are expressed relative to the average wage of all workers in 1970. Finally, the table shows the percentage change in wage levels for the different educational groups between age 25–34 and age 45–54.

The initial benefit that education provides is reflected in the initial wage gap among educational groups. Among native-born workers, for example, those with less than a high school diploma earned about 14 percent less than the average worker in 1970, while college-educated workers earned about 22 percent more. The same pattern is evident among immigrants—although immigrant workers earn less than natives at every educational level. This initial earnings gap increases steadily throughout the individual's career since the rate at which wages grow also varies based on education. Thus, the native worker with less than a high school diploma who made 14 percent less than the average in 1970 saw his wages increase only 13 percent over the next 20 years. As a result, he was actually still earning less in constant dollars then the average worker in 1970. The average college-educated worker, however, saw his earnings increase by 72 percent. As a result, his initial 22 percent advantage over the average worker in 1970 had swelled to 109 percent by 1990. Although both the levels and the rate of wage growth are lower, the same patterns are found among immigrants.

With this pattern as a backdrop, the balance of this section examines three questions: First, do the second and subsequent generations learn more than the first generation? Second, are there generational difference in career earnings growth? Third, do these patterns vary by education or country of origin? These questions are examined in Table 5.10, which presents the same analysis as Table 5.9 did but adds specific ethnic groups.

Although there are some exceptions, principally among non-Hispanic whites (the European-heritage population),[27] native-born residents clearly enjoy an initial wage advantage over their foreign-born ethnic counterparts. Among ethnic groups, the advantage in both 1970 and 1990 tended to be greatest for the Mexican and other Hispanic-heritage populations. The foreign-born population in these nationality groups, of course, has the lowest wages to begin with, suggesting that their native-born counterparts experience considerable wage progress over their foreign-born parents.

Although native-born workers as a group appear to enjoy faster wage growth than immigrants (compare the 1970–1990 wage change for all workers at each educational level), this pattern is not consistently observed for specific ethnic-heritage groups. Instead, the pattern of career wage growth appears to vary less by ethnicity than by educational level. Thus, both in the aggregate and for specific ethnic groups, career wage growth increases consistently with educational level but not by immigration status. As a result, the initial wage advantage that natives enjoy over immigrants is not compounded by faster wage growth after controlling for education.

Overall, there is considerable evidence that among most ethnic groups, the native-born population does better economically than immigrants. This is partly because the second generation enjoys a

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[27] Since most native-born workers of European heritage have been in the country for several generations, the assumption that most of the native-born population is second generation is clearly inappropriate for this group.

Table 5.10

Comparison of Career Earnings Patterns of Selected Native-Born and Immigrant Workers Between 1970 and 1990, by Region of Origin and Educational Level, in California

	Earnings Ratio Native-Born/ Immigrant Worker		1970–1990 Percentage Change	
Years of School/Region of Origin	1970	1990	Native-Born	Immigrant
<12	1.23	1.29	13	–3
Non-Hispanic white	0.98	0.87	15	31
Japan/Korea/China	1.22	(a)	15	37
Mexico	1.23	1.19	8	0
Other Hispanic	1.14	1.40	23	–14
12	1.03	1.31	24	15
Non-Hispanic white	0.91	1.03	26	23
Japan/Korea/China	1.26	1.24	22	46
Mexico	1.14	1.26	16	18
Other Hispanic	1.26	1.28	15	27
13–15	1.03	1.09	36	23
Non Hispanic white	0.96	0.96	37	42
Japan/Korea/China	0.81	0.80	70	28
Mexico	1.16	1.16	31	17
Other Hispanic	1.16	1.16	31	29
16+	1.16	1.15	72	65
Non-Hispanic white	1.07	1.00	75	77
Japan/Korea/China	1.11	0.99	78	85
Mexico	1.31	1.39	25	50
Other Hispanic	1.22	1.19	80	70

SOURCE: Tabulations based on U.S. Department of Commerce, *Public Use Sample*, 1970, 1980, and 1990.

NOTE: Percentage change refers to average weekly wage at age 25–34 in 1970 versus average weekly wage at age 45–54 in 1990. Sample: Native-born and immigrants age 25–34 in 1970.

[a] Too few native-born workers to estimate.

clear initial earnings advantage as compared with the earnings of immigrants. This may be due to better English skills, knowledge of the labor market, and employers' expectations among the native born. In addition, because, as we have demonstrated earlier in this chapter, they have more education than first-generation immigrants do, the second and subsequent generations also enjoy more rapid wage growth during their careers. However, at any given level of education, native-born workers experience about the same wage growth as immigrants. Thus, the key to continued economic progress depends more on educational level (and presumably work experience) than on being native born. Moreover, the rate of return to those with a higher education appears to vary for different groups, with Mexican Americans receiving a lower rate of return than other ethnic groups do (this is reflected in the finding that at every educational level, Mexican American workers have less wage growth over their careers than other groups do). Without additional analysis it is difficult to know what causes this differential or whether it will persist over time. What it suggests, however, is that although investments in education pay off for all groups, increasing educational levels, alone, will not erase the earnings differential among ethnic groups.

SOCIAL INTEGRATION

To this point, our discussion of immigrants' adjustment has focused exclusively on education and earnings. This focus reflects both the importance of these dimensions and the availability of data. But these dimension are not the only measures of integration. The process of integration involves a whole range of behaviors (language usage, marriage, and fertility), and attitudes toward family and society. Moreover, as we suggested in the introduction to this chapter, the economic and noneconomic dimensions of integration are often related. As immigrants and their offspring acquire more education and higher incomes, they are more likely to leave ethnic neighborhoods, to speak English, and to interact with native-born residents. But, as we also suggested earlier, the pace at which this upward mobility occurs is related to the skills they posses when they arrive. Since those skill levels differ substantially across groups, we might reasonably expect that the pace with which immigrants integrate into the social life of California society will also vary across groups. Moreover, the pace at which this integration occurs may also be affected by the degree to which the existing stock of immigrants is replenished with new cohorts of arriving immigrants. Indeed, as Meyers (1995) has pointed out, comparisons of aggregate statistics tend to obscure the progress individual cohorts of immigrants make, because, in an era of increasing immigration, aggregate statistics are heavily weighted with recent immigrants, who have had the least time to adjust to American society. In this final section, we review evidence of the integration of California's immigrants and their offspring across a range of behaviors.

Language Usage

In a previous chapter, we demonstrated that immigrants' English skills improve the longer they are in the country. We also showed that many immigrant groups arrive in the country with a solid command of English. This is true not only for European-heritage immigrants but also for selected Asian groups, e.g., Filipinos and Indians. Indeed, even the traditional Asian immigrants, only about half of whom speak English well when they arrive in the country, seem to acquire that skill within a decade or so of entry. Indeed, in a study of English language usage in the Los Angeles region, Lopez (1996) finds that native language usage is rarely maintained among native-born Asian Americans. Thus, the question of English language acquisition seems to be primarily an issue for Spanish-speaking immigrants from Mexico and Central America.

Even among Hispanic immigrants, the problems posed by inability to communicate in English seems to be, by and large, an issue of the first generation. McCarthy and Valdez (1986), for example, have shown that most second-generation Mexican Americans are bilingual and third-generation Mexican Americans are much more likely to be monolingual-English than Spanish speakers. This finding has been replicated by Lopez (1996) and Meyers (1995). Among first-generation Hispanic immigrants, English language skills improve markedly the longer immigrants are in the country, the higher their educational levels, and the younger they are when they arrive (Lopez, 1996).

Fertility Levels

Descriptions of the role immigrants play in California's growth often stress the fact that completed fertility among the state's foreign-born population is higher than that of the native-born population. Indeed, a recent study by Heim and Austin (1995) indicates that immigrant women in the state have, on average, 0.5 more children than natives.[28] Average completed family size, however, varies by ethnicity as does the native- to foreign-born differential. Among immigrants, Hispanic women generally have the highest completed fertility and non-Hispanic whites the lowest (3.76 versus 2.09). Among natives, Hispanic women also have higher completed fertility than all other groups, but the lowest native fertility levels are found not among non-Hispanic white women but among native-born Asian American women (3.20 versus 2.05). Indeed, although the number of children ever-born to Hispanic and Asian foreign-born women is substantially higher than to comparable natives, this native/foreign-born difference essentially disappears among black women and actually reverses among non-Hispanic white women.

What these patterns suggest is that the relationship between fertility and nativity[29] is not as straightforward as these aggregate comparisons suggest. Heim and Austin (1995) suggest that immigration per se appears to disrupt childbearing, so that the greatest differences between native-born women and immigrants are observed among older foreign-born women who completed their fertility before they entered the country.[30] These aggregate differences also reflect associated differences between immigrants and natives on such dimensions as labor force participation (working women have lower fertility than women who are out of the labor force—a difference that is even more pronounced among foreign- than native-born women), length of residence in the United States (the younger the age at which women enter the country, everything else equal, the lower their fertility), and, most important, education (fertility levels decrease as education increases—a relationship that is again stronger among immigrants than natives). Indeed, the differential between immigrants' and natives' fertility declines substantially—although it does not completely disappear—among comparably educated residents (Heim and Austin, 1995).

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[28] The number of children ever-born to ever-married women 45–54 in 1990 was 2.97 for the foreign-born women versus 2.42 for native-born women (Heim and Austin, 1995, Table 3).

[29] Nativity refers to the difference between native- and foreign-born status.

[30] In part, this disruption reflects differences in the timing of childbearing between immigrants and natives. Immigrant women start their childbearing sooner than natives, but the process of moving appears to disrupt this pattern.

These patterns suggest that the apparent differences in childbearing behavior between native-born women and immigrants are less a by-product of where a women is born than how well educated she is. This finding is significant because it suggests that, to the extent differences in fertility reflect different beliefs about the role of the family and women's employment, these differences may be less a product of ethnic culture and more a result of education. Hence one might anticipate that the key to convergence in fertility patterns is convergence in educational levels.

Residential Integration

The degree to which immigrants and their native-born offspring live in ethnically heterogeneous neighborhoods rather than ethnic enclaves is both an important indicator and a determinant of their integration into American society. It is an indicator of integration because it is often a sign of upward mobility. It is an important determinant of integration because it tends to weaken the connection to distinctive ethnic patterns of behavior and values and to strengthen the influence of broader cross-cultural patterns of behavior and values.

A recent study by Clark (1996) examines in considerable detail the changing patterns of residential separation among ethnic groups in the greater Los Angeles area. Although Clark's study, like most prior studies of residential segregation,[31] does not distinguish among ethnic groups by nativity, it does present a uniquely detailed and comprehensive picture of the changing patterns of ethnic separation in California's largest metropolitan area, which is home to 60 percent of the state's immigrants. Clark begins by noting that the new era of immigration has made the traditional patterns of residential separation far more complex than in the past, when the major distinctions among neighborhoods was drawn in terms of black-white differences and the predominant pattern reflected increasing residential separation. Not only has the ethnic composition of California's cities become far more diverse, but the state, and to a lesser extent, the country, has seen the emergence of a host of cities with no single racial/ethnic group in the majority.[32]

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[31] There is an extensive literature on residential segregation patterns in American society. This literature, however, has tended to focus on black-white differences and, to a lesser extent, on ethnic differences in residential separation. See Tauber and Tauber (1969) and Lieberson (1963) for classic treatment of these issues. More recent examples of this literature can be found in Frey and Farley (1993) and Clark (1992).

Moreover, residential separation within both Los Angeles County (the urban core) and the surrounding counties of Orange, Riverside, San Bernardino, and Ventura has been declining by any measure and at any geographic scale.[33] Although this pattern is more pronounced when comparing non-Hispanic white groups, it is also true of comparisons between non-Hispanic whites and Asians, Hispanics, and blacks. This decline and the average values of Clark's various indices are particularly striking when compared with levels of residential separation found in older Eastern and Midwestern cities.

Although Clark acknowledges that these trends can be viewed as a sign of progress, he questions whether this pattern will continue or whether it simply reflects a transition from the old pattern of black-white separation to a new and more complex pattern of interethnic separation, occasioned by the rapidly changing ethnic complexion of the Los Angeles region. He offers no firm prediction of the future but suspects that the eventual determinant will be whether large-scale immigration of Hispanics and Asians continues to the Los Angeles area.

Naturalization

Naturalization is a particularly symbolic step in an immigrant's integration into American society because the decision to become a citizen represents a formal acknowledgment of an immigrant's acceptance of his or her American identity. Indeed, the recent policy debate about providing public service benefits only to citizens is driven, at least in part, by the importance the American public attaches to this acceptance.

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[32] As of 1990, 10 of California's largest cities (including Los Angeles and San Francisco) fall into this category.

[33] Clark (1996) compares a variety of measures (the index of dissimilarity, the entropy index, and the presence of ethnic enclaves) and a variety of geographic scales (communities, Census tract, and Census blocks) in his analysis. In general, the finer the geographic scale the higher the level of ethnic separation.

Table 5.11 provides some insight into the naturalization process, by comparing naturalization rates among different nationality groups by the immigrants' dates of entry. The regions are listed here in rank order of the cumulative naturalization rate for the earliest entry cohorts. Thus the comparison enables us to compare origins not only in terms of the eventual naturalization rate but also based on the timing of the process.

Although immigrants are technically eligible to apply for citizenship after five years of permanent residency status, it is clear that the decision to naturalize is often a gradual one. Relatively few (in the aggregate 13 percent) immigrants naturalize within 10 years of arriving in the country. Instead, it appears that many immigrants—even if they are committed to settling permanently in the United States—take some time before they finally decide to become citizens. But the vast majority of those who, in fact, do remain eventually do naturalize. The cumulative naturalization rate after 20 years is 50 percent and after 30 is 75 percent.

The speed with which these decisions are made (and the proportion of immigrants who make them) varies by country of origin. At one extreme are Filipino immigrants, over 25 percent of whom have become citizens within 10 years of entry and over 75 percent within 20.

Table 5.11

Naturalization by Region of Origin and Period of Entry, in California, 1990 (in percentage)

	Period of Entry			
Region of Origin	1980s	1970s	1960s	Pre-1960
Philippines	26	77	88	91
Europe	15	49	61	89
Other Asia	13	52	72	87
Japan/Korea/China	15	64	78	83
Other	13	45	62	80
Indochina	19	58	71	(a)
United Kingdom/Canada	8	29	45	79
Central America	9	25	48	71
Mexico	11	21	31	47
Total	13	39	52	75

SOURCE: Tabulations based on U.S. Department of Commerce, 1990.

[a] Too few immigrants to estimate.

At the other extreme, are Mexicans, fully 50 percent of whom had not naturalized even after more than 30 years of residence.

Although the data reported in the table cover broad regions, a more detailed country-level analysis indicates that immigrants from areas with large numbers of refugees, e.g., Eastern Europe and Indochina, have more rapid naturalization rates than others. At the other extreme, the three regions of those with the slowest (and lowest) naturalization rates either lie within close proximity to the United States, e.g., Mexico and Central America; are culturally very closely related, e.g., the United Kingdom and Canada; or both. Presumably, many of the immigrants from these countries either come with the notion that they may eventually return or, because of proximity, remain in closer touch with families and events in their former homelands. Prior studies, for example, have suggested that many Mexican immigrants originally come to the United States with the idea of accumulating a nest egg and then returning to live or retire in Mexico (Camarillo, 1984; Cornelius, 1978; and Jones, 1985). In essence, then, they may initially view themselves more as sojourners than as settlers. As a result, they keep in contact with, remit money to, and return to visit with some frequency to their homeland. Moreover, since Mexican laws prohibit foreign nationals from owning land, they may be reluctant to renounce their Mexican citizenship to become Americans. However, if they remain in the United States, many eventually become citizens.

The data reported here are based on the 1990 Census. More recent INS data (1996a and b) however, indicate that there has been a dramatic surge in naturalizations since 1990. For example, in 1990 just 270,000 immigrants were naturalized. By 1993 the number of applications for naturalization had climbed to over 500,000 and by 1995 to over 1 million. The number of actual naturalizations has climbed accordingly. The INS estimates, for example, that by the close of fiscal year 1996 (September 30), over 1.1 million immigrants will be naturalized—with at least as many naturalizations expected next year (*New York Times*, 1996b).

Several factors are assumed to be responsible for this increase (which, not surprisingly, has been concentrated in California and the four other states with large numbers of immigrants). First, the 1986 IRCA law granted amnesty and the promise of permanent residence to over 2.7 million formerly illegal immigrants. The bulk of these immigrants are now eligible to apply for citizenship and many appear to be doing so. Second, the passage of Proposition 187 in California, together with the recently enacted welfare reform act, which prohibits noncitizens from receiving certain forms of public assistance, has prompted many legal immigrants to naturalize to maintain their eligibility for assistance and to protect themselves from what many view as a backlash not just against illegal but also against legal immigration. Third, the INS, in a departure from tradition, has actively promoted naturalization in recent years.

CONCLUSIONS

This analysis of the economic, educational, and social integration of immigrants paints a generally positive picture of that process over the long term. Whether one focuses on economic, educational, or social progress, most groups of immigrants seem to be doing well—particularly after they have been in the country for a while. This is certainly true of European and most Asian immigrants and also appears to be true, if to a lesser extent, of Mexican and Central American immigrants. Although many of these latter immigrants enter with low levels of education, do not acquire any additional schooling after they arrive, and experience slow economic progress during the first generation, most appear to acquire English and they are increasingly naturalizing after their arrival. Moreover, their children learn English and make substantial educational and economic progress. Thus, these results seem to support the traditional multigenerational model described in the literature.

However, since different nationality groups appear to move toward parity with native-born residents at very different rates, the traditional three-generation model seems to fail to capture the complexity of the current reality. Rather, as suggested by various critiques of the traditional integration model, increasing differences now exist in terms of the educational and skill level that today's immigrants bring with them when they arrive. Moreover, a California economy which provides fewer opportunities for low-skill immigrants appears to be compounding the upward mobility problems that low-skill immigrants face after they arrive. In addition, a continuing large-scale inflow of immigrants not only obscures the progress that these immigrants do make, but it may also compound some of the problems they face. As a result, it is not altogether clear when Mexican Americans and Hispanics of Central American descent will be able to reach parity with other immigrants or the native born—even given the substantial progress that they make between the first and second generations.

What is clear, however, is that education has become increasingly important to the economic and social progress that both immigrants and their native-born offspring do make. While this will certainly not obviate the need for hard work and enterprise to attain success, it would seem to guarantee that these attributes, although perhaps necessary, are certainly not sufficient conditions for economic and social progress. This trend also calls attention to the fact that even with the progress that Mexican Americans have made over their parents, they still lag behind other natives, especially in education. Given the close correlation between parental income and education and children's educational attainment, and the fact that so many of today's immigrants are from Mexico or Central America and have limited formal schooling, there may be related problems for the future. A particular cause for concerns is that, although today's low-skill immigrants clearly benefit from more education in terms of higher earnings, Mexican Americans with college degrees do not appear to receive the same return on their education as other immigrants do.

Chapter Six

THE CHANGING ECONOMY AND THE IMMIGRANT LABOR FORCE

California's share of the national economy has increased steadily and, by 1990, accounted for one-sixth of the gross domestic product (GDP). In size, California's GDP is larger than that of any other state and the economy of most countries in the world. This chapter first reviews how California's economy changed between 1960 and 1995—three decades of steady economic growth followed by the worst recession California has suffered in 60 years. We compare those changes to those that occurred in the rest of the nation. The second section examines the growing importance of immigrant labor to the California economy. It also documents how immigrant workers in California have become increasingly different, both from native-born workers and their immigrant counterparts in the rest of the nation.

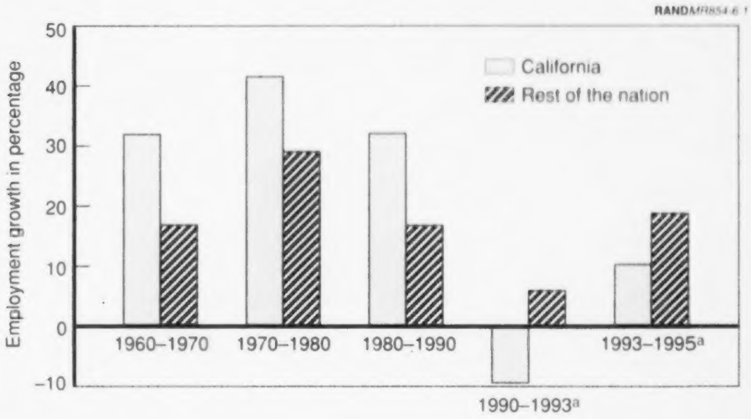
CALIFORNIA'S GROWING AND DYNAMIC ECONOMY

Over the 1960 to 1995 period, successively larger number of immigrants have entered an economy that

- has generally grown faster than the rest of the nation, both in aggregate and by industry
- has steadily shifted toward services at the expense of manufacturing, agriculture, and public administration—as has the national economy
- has increasingly relied on college-educated workers.

California Labor Force Grew Faster Than That of the Rest of the Nation

Throughout the 1960–1990 time period, employment in California grew continuously faster than that in the rest of the nation. It grew by a third in the 1960s, at nearly twice the rate of the rest of the nation's. It grew even more rapidly in the 1970s, although only a third more rapidly than that in the rest of the nation. And the 1980s were a mirror image of the 1960s, as far as growth of the California employment was concerned: again employment grew by one-third over that decade at nearly twice the rate of the that in rest of the nation (Figure 6.1). In that decade, the California economy created an average of 350,000 additional jobs per year. By 1990, more than 15 million people were employed in the state. As will be shown below, California enjoyed this growth advantage both during a period of comparatively low immigration, the 1960s, and during periods of increasingly higher immigration, the 1970s and the 1980s.



SOURCE: U.S. Department of Commerce, *Public Use Samples*, 1960, 1970, 1980, and 1990.

[a] For comparison with the decennial rates from 1960 to 1990, these rates are adjusted rates applicable over a 10-year time period.

Figure 6.1—Employment Growth in California and the Rest of the Nation, 1960–1995

After 1990, the California economy suffered a sustained reversal of fortune that lasted about five years. During the first three years of this unusually deep recession, California lost an average of 135,000 jobs annually, while immigration continued at roughly the same pace, adding an estimated 270,000 immigrants yearly, compared with an average 287,000 during the 1980s.[1] By 1994, the economy was once again creating new jobs, but at less than a third the rate that California had been accustomed to for three decades. It was not until late 1995 that employment in California returned to the level of 1990. By contrast, the rest of the nation suffered a relatively mild and short recession, adding 6 million jobs between 1990 and 1995, while California added no new net jobs during that same period of time.

By 1996, California's economy had recovered, once again growing at a faster rate than the nation: a 2.7 percent annual rate compared with 1.9 percent for the rest of the nation (Center for Continuing Study of the California Economy, 1996). Although the California Center for Continuing Study of the California Economy (1996) projects that job growth will continue to exceed that of the nation through the year 2005, it also projects an overall job growth for California of about 19 percent over the 1995–2005 decade, a rate that is about half the rate the state sustained during the 1960–1990 period.

During the 1960–1990 period, the strength of the California economy benefited all major sectors (all grew faster in California than in the rest of the nation). Table 6.1 shows the positive regional shifts in California in all major sectors of the economy over the 1960–1990 time period. The California shift is simply the difference between the rate of growth of employment of a specific sector in California and the rate of growth of that same sector in the rest of the nation. For instance, from 1960 to 1990, durable manufacturing grew at a rate of 73.5 percent in California compared with 20.8 percent in the rest of the nation, amounting to a shift in that sector in California of 52.7 percentage points.

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[1] The Bureau of the Census estimates that 1,380,000 immigrants entered California between 1990 and 1995, contributing 40 percent of the state's net population growth (U.S. Department of Commerce, 1996, p. 30, Table 29). The employment estimates are from unpublished tables from the California Employment Development Department.

Table 6.1

Regional Shifts in the California Economy by Major Sector, 1960–1990

Major Sector	Regional Shift Towards California[a] (percentage points)		1960-1990 Change in Share of Total California Labor Force (percentage points)	1990 Share of Total California Labor Force (in percentage)
	1960-1990	1990-1995		
Agriculture	104.8	-3.8	-1.4	3.3
Construction	79.2	-12.8	.3	7.0
Manufacturing				
Durable	52.7	-15.9	-4.7	11.4
Nondurable	59.1	+1.1	-2.9	5.4
Transportation	92.0	-4.2	.4	4.1
Communications	19.1	-9.7	-.1	1.4
Utilities	11.4	+2.6	-.4	1.1
Wholesale	67.7	-11.5	.7	4.5
Retail	69.7	-8.9	1.7	16.4
FIRE[b]	70.8	-8.4	2.3	7.3
Business/repair	73.2	+12.3	2.5	5.9
Personal services	61.1	+1.5	-2.1	3.5
Entertainment	14.3	-22.6	3.2	4.7
Health	44.4	-3.7	1.7	5.8
Education	26.6	-4.6	1.9	7.2
Other professional	165.4	-5.2	4.2	6.9
Government	4.6	-2.4	-1.7	4.3
Total	70.3	-6.4	0.0	100.0

SOURCES: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990; U.S. Department of Commerce, 1996; and unpublished tabulations of the California Employment and Development Department.

NOTE: The percent in the last column may not add to 100 because of rounding.

[a] The regional shift is the difference between the rate of growth of a specific sector in California and the rate of growth of the same sector in the rest of the nation. A positive value indicates the percentage points at which the sector has grown faster in California than in the rest of the nation. A negative value indicates the percentage points at which a sector has grown slower in California than in the rest of the nation.

[b] Finance, insurance, and real estate.

All of the growth shifts that took place during the 1960 to 1990 time period have been to the relative benefit of California and at the expense of the rest of the nation, with a few exceptions. Construction suffered a relative (although not an absolute) decline in California in the 1960s (a negative regional shift of 5.5 percentage points) but recovered strongly in the two subsequent decades. And so did the transportation sector. Similarly, three sectors experienced a relative decline (although not an absolute one) in California in the 1970s: entertainment, education, and government. In the 1980s, every single major sector of the economy grew more rapidly in California than in the rest of the nation.[2]

Just as there was remarkable consistency in California's increased share of national employment in each major sector of its economy during the 1960–1990 period of growth, there was also consistency in nearly all sectors of the California economy losing ground to the rest of the nation's economy during the 1990–1995 California recession (Table 6.1, third column). The only exceptions were business and repair services, which continued to grow more rapidly in California than in the rest of the nation, and utilities and nondurable goods, which declined at the same rate as they did in the rest of the nation. Durable manufacturing goods, construction, and entertainment were the two sectors that lost the most ground *relative* to those sectors in the rest of the nation during the long California recession. But unlike the first two sectors, entertainment did experience a vigorous positive employment growth (26 percent) during the recession, but that growth was lower than that experienced in the rest of the nation (48 percent). The other two sectors, like nearly all other sectors of the economy, lost employment during the 1990–1995 time period. Impacted severely by defense downsizing, durable manufacturing lost 20 percent of its employment, or nearly 300,000 jobs, during that period of time.

Different Sectors Grew at Different Rates

There also was consistency in the sectors that led and lagged *within* the California economy across all three decades (Figure 6.2). Finance, insurance, and real estate (FIRE) and business/repair services were consistently among the top leading sectors in California throughout the 1960–1990 period. And other professional services grew faster than any industry in the 1960s and the 1990s. As a result,

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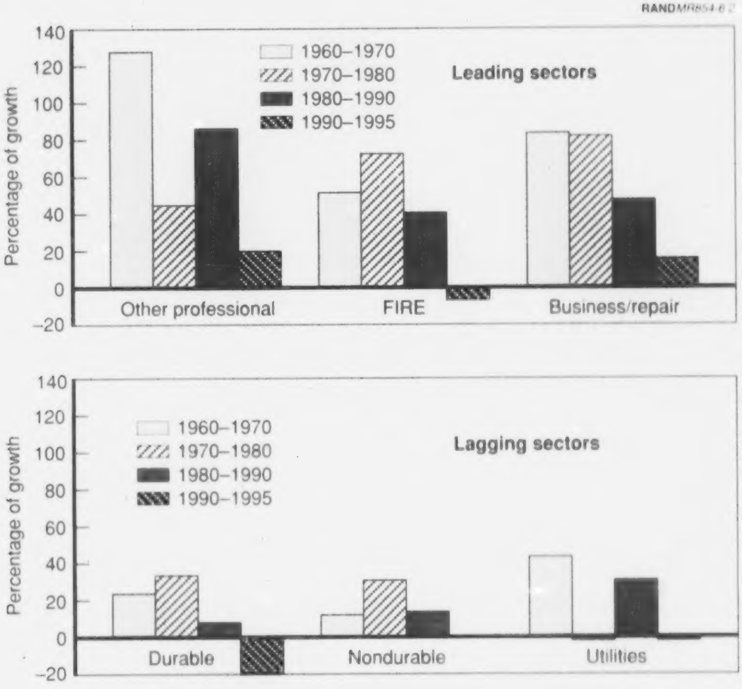
[2] Shifts in California's favor by decade are contained in Table C.1, Appendix C.



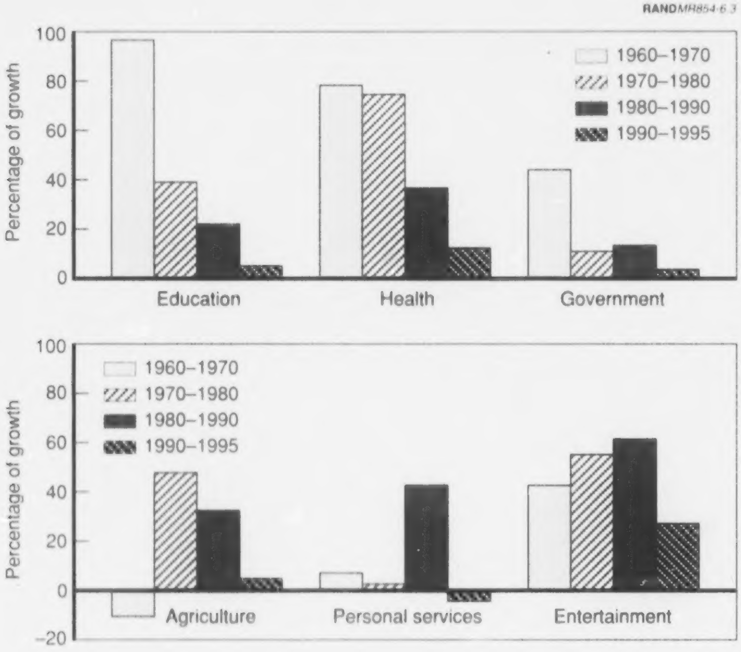
SOURCE: Appendix Table C.2.

Figure 6.2—Employment Growth Patterns in Leading and Lagging Sectors of California's Economy, 1960–1995

their combined share in the economy nearly doubled, from 11 percent in 1960 to 20 percent in 1990. These sectors, with the exception of FIRE, continued to experience positive employment growth during the 1990–1995 recession.

In contrast, durable and nondurable goods manufacturing and utilities lagged consistently throughout the 1960–1990 time period. As a result, their share of the California economy decreased from 26 percent in 1960 to 17 percent in 1990. This is not to say that they did not grow in absolute terms during this 30-year period; indeed, durable goods employment, for instance, grew steadily over this period of time at five times the rate in the rest of the nation. But they grew far less rapidly than the rest of California's economy. Also, these three sectors lost employment during the 1990–1995 recession, with durable goods and manufacturing most affected, as already noted above.

Each decade was also marked by unique shifts in specific sectoral growth in employment—the most important of which are noted here (Figure 6.3). Education experienced a vigorous growth in the 1960s,



SOURCE: Appendix Table C.2.

Figure 6.3—Employment Growth Patterns in Selected Sectors of the California Economy, 1960–1995

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doubling in size, only to experience a significantly slower growth in the 1970s and the 1980s. The health industry similarly grew vigorously in both the 1960s and 1970s, only to significantly slow down in the 1980s. Government's growth began to lag behind other sectors in the 1970s and 1980s decreasing its share of the labor force from 6.0 percent in 1960 to 4.3 percent in 1990. These declining trends accelerated during the 1990–1995 time period. Long-term declining trends in these three heavily public sectors, both relative to other sectors within California and within the same sectors in the rest of the nation, are particularly notable. They signify steady relative disinvestments in these important publicly funded sectors, which include education and infrastructure. We return to this issue in Chapter Ten.

Figure 6.3 also displays long-term employment trends in two sectors that have increasingly become dependent on immigrant labor (agriculture and personal services) and one sector that to this date does not, entertainment.[3] Although California's agriculture sector is among the sectors whose national share has increased most rapidly, it is not a rapidly growing employment sector. The situation is similar for the personal services section, which has remained stagnant in size since 1960, except for a spurt of growth during the 1980 decade. The recession of 1990 put an end to employment growth in this sector.

Finally, entertainment, although small in size, has grown throughout the 1980–1990 period, and weathered the 1990–1995 recession more successfully than any other sector. However, as vigorous as the growth of this sector has been in California, it did not markedly increase its share relative to the rest of the nation, and even lost ground to the rest of the nation during the 1990–1995 time period.

Increasing the Share of College-Educated Workers

The new jobs added to the economy between 1960 and 1990 were filled primarily by workers with some college education. Of the nearly 9 million net new jobs (this figure is the difference between 15 million jobs in 1990 and 6.1 million in 1960) created by the California economy, 22 percent were filled by high school graduates and the remaining 75 percent were filled by workers with some college education or by college graduates (Table 6.2).

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[3] Trends in the share of immigrants by sectors and industries are discussed in Chapter Seven.

The share of net new jobs filled by college-educated workers has accelerated over time. Almost half of the net jobs added during the 1960s were filled by workers with some college education and, in the 1970s, it was 73 percent. Nearly all net new jobs, 96 percent, were filled by such workers in the 1980s.

By contrast, the number of jobs that were filled by high school dropouts declined by 8 percent, from 2.6 million in 1960 to 2.4 million in 1990. In other words, no net new jobs are being created by the California economy for workers without a high school diploma. And increasingly fewer jobs are being added for those with only a high school diploma, only about *133,000* during the 1980 decade, or about 13,000 a year.

This "educational upgrading" of the labor force has taken place in every sector of the economy. Table 6.3 compares the level and change in the share of workers with some college education between high-growth and low-growth sectors. Three trends stand out. First, as early as 1960, the share of workers with a college education was already significantly higher in the faster-growing than in the slower-growing sectors: 36 versus 22 percent. Second, the share of workers

Table 6.2

Number of Jobs by Educational Attainment, in California and the Rest of the Nation, 1960–1990 (millions)

Level of Education	California				Rest of the Nation			
(Years)	1960	1970	1980	1990	1960	1970	1980	1990
< 12	2.6	2.4	2.5	2.4	33.2	29.0	23.8	16.0
= 12	1.8	2.8	3.7	3.8	16.8	25.2	36.0	37.1
13–15	.9	1.6	2.9	5.0	5.9	8.9	16.7	31.2
16 +	.7	1.2	2.3	3.7	5.6	8.8	16.2	24.0
Total	6.1	8.0	11.3	15.0	61.5	71.8	92.7	108.3

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

Table 6.3

Share of Labor Force with Some College Education in California Sectors with Increased, Constant, and Decreasing Shares of the Labor Force, 1960–1990

	Share of Total Labor Force		Share of Labor Force with Some College Education	
Sector with:	1960	1990	1960	1990
Increased share of labor force[a]	38.5	54.2	35.9	64.1
Constant share of labor force[b]	18.0	18.1	19.6	51.9
Decreased share of labor force[c]	42.7	27.9	21.6	51.5
Total	100.0	100.0	26.6	58.4

SOURCE: U.S. Department of Commerce, 1960 and 1990.

[a] Includes the retail, FIRE, business/repair, entertainment, health, education, and other professional sectors.

[b] Includes the construction, transportation, communications, utilities, and wholesale sectors.

[c] Includes the agriculture, durable and nondurable manufacturing, personal services, and government sectors.

with some college education has doubled in the fastest growing sectors, from one in every three workers in 1960 to two in every three workers in 1990. And third, *the growth in the share of workers with some college education has been the most rapid in the slowest-growing sectors of the economy.* In these sectors, the share of the labor force with some college education increased from one in five workers in 1960 to one in two workers in 1990.

In brief, the growing number of immigrants, nearly two-thirds of whom have had no college education, have been entering a California economy whose use of college-educated labor has steadily increased and is expected to continue to increase disproportionately. How these immigrants have been integrated in this economy, and with what effects, is examined in subsequent chapters.

As dramatic as these long-term California trends have been, they have been even more so in the rest of the nation. Of the 47 million jobs added during the 1960–1990 time period in the rest of the nation, 93 percent were filled by workers with some college education or by college graduates. Whereas the number of jobs in the California economy held by high school dropouts remained relatively constant throughout the 1960–1990 time period, the number of these jobs in the rest of the nation has declined by half from 33 to 16 millions. This divergence between California and the rest of the nation in the rate with which "restructuring" is taking place in the low-skill sectors of their respective economies suggests that the disproportionately large immigration of less-educated workers to California has slowed down this state's long-term, seemingly inevitable, restructuring in its low-skill sectors.

The trends toward fewer *net* new jobs filled by non-college-educated labor does not mean there are no jobs opening for workers—including the many immigrants—with a high school education or less. As we shall show in the next chapter, the labor market is dynamic, with older less-educated workers retiring and adult workers upgrading their education and moving into new jobs. In this dynamic process, these "vacant" jobs are backfilled by less-educated younger workers, most often immigrants. What these trends suggest, however, is that the availability of such jobs is shrinking over time, in contrast to the widespread belief that "economic restructuring" that has taken place over the past 20 to 30 years has led to an expansion of jobs for low-educated workers (Sassen, 1991; Boyd, 1996). Instead, the trends documented here are consistent with the increasing movement "offshore"—to Mexico and Asian countries—of low-skill manufacturing and some service jobs.

The growing trend toward filling net new jobs with workers who have at least some college also appears at odds with the Bureau of Labor Statistics (BLS) projections that up to 40 percent of the 26 million net new jobs projected to be created by the year 2005 by the national economy will be filled by high school graduates (29 percent) and high school dropouts (11 percent) (Silvestri, 1993). One possible explanation may be that the BLS projection is static; i.e., it applies to the projected 2005 distribution of jobs by occupations with the same overall educational composition of the labor force as was prevailing in 1992.[4] Hence, BLS projections may underestimate the level of education, or alternatively skills, needed to perform the tasks demanded by employers in an increasingly competitive and service-oriented economy, even in traditionally low-skill occupations. There is evidence that, increasingly, jobs available to less-educated workers require the daily performance of one or more cognitive/social tasks, such as dealing with customers, reading and writing, arithmetic calculations, and the use of computers (Holzer, 1996; Murnane and Levy, 1996). These skills can be taught at the primary and secondary school level, but often they are not (Murnane and Levy, 1996). As a result, employers may require credentials, such as some postsecondary education (or at least specific experience beyond a high school diploma), to screen out potential workers who may lack these necessary cognitive/social skills (Holzer, 1996). In this event, it is not so much that a college education is needed to fill a large share of newly created jobs; rather it is that the cognitive and social skills required by employers need to be taught in and acquired at the secondary educational level. Until then, however, the trends described above mean that at least some college *has* become a widespread prerequisite for filling new jobs created by the economy, including jobs traditionally labeled as "low skill."

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[4] The BLS projected growth by occupations and then applied to these projections the distribution of the overall labor force by education in each occupation. Its focus on the educational distribution of all workers, rather than on those filling newly created jobs as we do here, would underestimate the educational level required by newly created jobs.

IMMIGRANTS: ANOTHER SOURCE OF LABOR

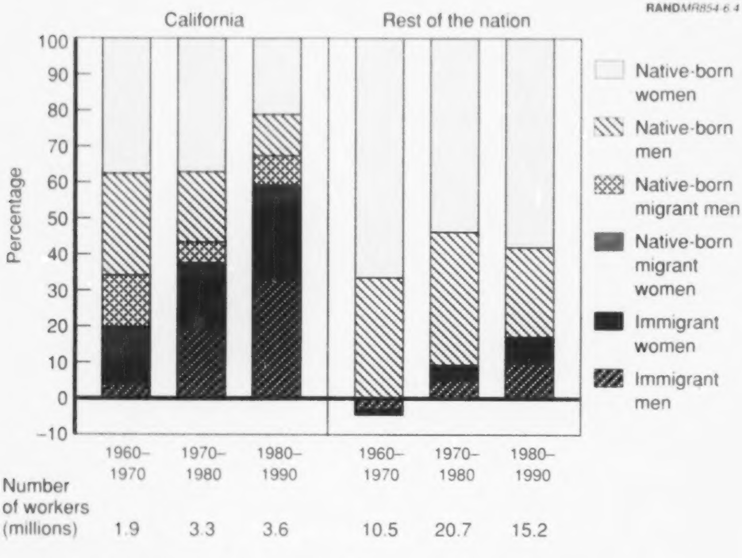
To California employers, immigrants are a growing source of both less- and well-educated as well as cheaper labor. However, over time the overall level of education of immigrant workers *relative* to that of native-born workers has declined.

A Growing Component in the Increasing Labor Force

New jobs created by the California economy, as well as current jobs vacated by workers retiring or moving to other jobs, can be filled in various ways including the following: by immigrants from abroad, by migrants from other states, by California residents entering the labor force as young adults, or by women increasing their participation in the labor force.

The relative contribution to employment growth of these sources varied in each decade since 1960 (Figure 6.4). Between 1960 and 1970, when employment grew by one-third, the vast majority of new entrants into the labor force were already residents of California, or were migrants from other states. Only one in ten new workers was an immigrant. During that decade, women contributed a greater share in the growth of the labor force than men—55 versus 45 percent.

Between 1970 and 1980, when employment grew by 40 percent, immigrants contributed one out of every three new workers and native-born women continued to enter the labor force at high rates. At the same time, the share of native-born migrants from other states declined from one in four in the 1960s to one in ten in the 1970s. The largest decline in the share of the growth of the labor force between the 1960s and the 1970s came from native-born men, whose contribution to growth in the labor force declined by more than 40 percent.



SOURCE: Department of Commerce, 1960, 1970, 1980, and 1990.

Figure 6.4—Distribution of Employment Growth by Immigration Status for California and the Rest of the Nation, 1960–1990

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Immigrants became the majority—54 percent—of new entrants in the labor force in the 1980s. There was no further decline, and indeed a modest increase, in the contribution of migrants from other states. Whereas in the 1970s the largest decline in the share of the growth of the labor force had come from native-born men, in the 1980s, it was native-born women whose share of growth declined the most, by a 35 percent.

Even though no net new jobs were created over the 1990–1995 recessionary years in California, immigrants have continued to come at about the same peak rate of the 1980s, and to fill an increasing share of California jobs.[5] The Bureau of the Census estimates that 1.4 million immigrants came to California during that time period, while 1.5 million residents of California left the state for other parts of the country.[6] Jobs vacated by those leaving the states were undoubtedly filled by newly arrived immigrants.

The pattern of labor force growth in California differs significantly from the rest of the nation (Figure 6.4). In the rest of the nation-born, native women provided the bulk (from 55 to 64 percent) of new entrants in every decade from 1960 to 1990. In contrast to California, immigrants played only a minor role: The number of immigrants in the economy of the rest of the nation declined by 5 percent in the 1960s, while California's immigrant workers increased by 10 percent. In the subsequent two decades, immigrant labor in the rest of the nation contributed a growing share of the growth of the labor force, 9 and 17 percent, respectively; but this share has remained about 33 percent of that in California. In the 1990–1995 time period, immigration continued to increase its share in the growth of the labor force to 21 percent.

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[5] During the 1990–1995 time period, an estimated 280,000 immigrants took residence in California annually, compared with an annual average of 257,000 immigrants during the 1980s.

[6] The Census estimates that 1.8 million people were added to California's population from 1990 to 1995. Components of that growth included 3.1 million births, 1.1 million deaths, 1.4 million immigrants, and 1.5 million net out-migration of California residents. Net out-migration during the 1990–1995 period contrasts sharply with the net migration to California from other parts of the country. This issue is further discussed in Chapter Eight.

The share of native-born men in the growth of the labor force declined in both the rest of the nation and in California, although more rapidly in the latter. This overall trend reflects the decline in the size of cohorts of young adult men entering the labor force and a slight decline in their labor force participation—from 94 percent in 1970 to 92 percent in 1990—a pattern that occurred at the same rate in both California and the rest of the nation. In contrast, native-born women have steadily increased their labor force participation—from 49 percent in 1970 to 70 percent in 1990—again an increase that has taken place at the same rate in California and the rest of the nation.

An Educationally Mixed Labor Force

As noted in the previous chapter, immigrants at all levels of education have come to California, and over time their educational level has increased (Table 6.4). For instance, in 1970, 29 percent of immigrants in the labor force had a college education and 46 percent had less than 12 years of schooling. By 1990, 40 percent of immigrants in the labor force had a college education and 37 percent had less than 12 years of schooling.

Table 6.4

Distribution of Educational Attainment of Workers, by Immigration Status, in California and the Rest of the Nation, 1970–1990 (in percentage)

	California						Rest of the Nation					
	1970		1980		1990		1970		1980		1990	
Years of Schooling	I	N	I	N	I	N	I	N	I	N	I	N
< 12	46	28	43	17	37	9	51	40	36	25	27	14
12	25	36	22	34	23	26	24	36	28	39	27	35
13–15	16	21	17	27	21	38	11	12	16	18	22	29
16 +	13	15	17	21	19	27	14	12	20	17	24	22
Total	100	100	100	100	100	100	100	100	100	100	100	100
Mean Years of Schooling	10.4	12.2	10.7	13.0	10.8	13.4	10.3	11.4	11.5	12.4	11.8	12.9

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970, 1980, and 1990.

NOTE: I stands for immigrant workers and N for native-born workers. Columns may not add to 100 percent because of rounding.

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The increase in immigrant education has been slower than that of native-born students, however, leading to a growing educational disparity between immigrants and natives. This growing deterioration in immigrants' *relative* educational attainment is most apparent at the lower levels of education. By 1990, immigrants were four times more likely to have less than 12 years of education than natives, compared with two times more likely 20 years earlier, and constituted 60 percent of all workers with less than 12 years of education.

Although less pronounced, this trend has also taken place at the top end of the educational distribution. In 1970, California's share of immigrants with a four-year college education was 15 percent lower than that of native-born residents (13 versus 15 percent). By 1990, this differential in share had more than doubled; 19 versus 27 percent.

In contrast to California immigrants, the educational attainment of immigrants in the rest of the nation did *not* deteriorate relative to that of native-born residents, underlining the negative educational selectivity of immigrants to California relative to other parts of the nation, as noted in Chapter Three.[7]

A Cheaper Labor Force

The qualitative literature on immigration is replete with references to immigrants' willingness to work harder at lower wages. Indeed, the pattern of changes in weekly earnings between immigrants and native-born workers over time presented in Table 6.5 are consistent with the view that immigrants are willing to work (or have to accept work) at lower wages than natives, at least in California, if not in the rest of the nation. Because differentials in weekly earnings in part reflect differences in workers' productivity, which in turn are related to differences in formal education and to job-specific skills, this table compares weekly earnings between immigrants and native by levels of education.[8]

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[7] As noted in Chapter Three, this disparity between the rest of the nation and California is mainly due to differences in the share of immigrants by country of origin.

[8] In multivariate analyses, Schoeni, McCarthy, and Vernez (1996) show that differences in weekly earnings are explained in large part by differences in levels of education

Table 6.5

Ratio of Immigrant to Native-Born Workers, Mean Weekly Earnings, by Educational Attainment, in California and the Rest of the Nation, 1960–1990

Years of	California				Rest of the Nation			
Schooling	1960	1970	1980	1990	1960	1970	1980	1990
< 12	.93	.92	.90	.90	1.16	1.09	1.04	1.09
12	.94	.95	.93	.84	1.11	1.06	.99	1.04
13–15	.99	.95	.96	.93	1.07	1.07	1.01	1.03
16 +	.86	.88	.91	.87	1.00	1.02	1.09	1.02

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

NOTE: Workers includes both men and women.

Weekly earnings of immigrants in California have consistently remained below those of native-born workers over the past 30 years across all levels of education, i.e., from high school dropouts to college graduates. Indeed, the earnings gap between immigrant and native-born workers has been consistently higher at the college graduate level than at lower levels of education.

This pattern of immigrants commanding lower earnings hold not only across all levels of education, but across all occupations as well. Table 6.6 compares the hourly wages employers paid to immigrants to those of native-born workers in 1990 for selected occupations. It shows, for instance, that an immigrant laborer with 12 years of education received an average $9.00 per hour compared with $11.00 for a native-born laborer. And an immigrant college graduate engineer received an average $22.40 an hour compared with $23.50 for a native-born engineer. And, while a foreign-born computer programmer with some college received an average of $16.80, a native-born programmer received $17.60. The only exceptions are for high

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between immigrants and natives. We also examined changes in weekly earnings, hours worked, and hourly wages of workers, controlling for both education and occupations (to account for potential skills effects in addition to educational effects). The differential trend patterns between immigrants and natives, noted in this section, held in this analysis as well (see Chapter Five).

Table 6.6

Hourly Wages by Occupation, Education, and Immigration Status, in California, 1990

	Hourly Wages (dollars per hour)							
	< 12		= 12		13–15		16 +	
Occupation	I	N	I	N	I	N	I	N
High skill								
Executive, administrator, management	13.6	15.5	15.1	16.0	17.4	17.5	22.9	24.8
Professionals	10.2	12.9	12.9	13.8	15.0	15.7	21.4	22.5
Engineers					18.7	20.7	22.4	23.5
Math, computers					21.7	17.9	21.1	21.5
Health professional					17.3	17.2	27.6	29.3
Other professional					14.1	15.7	18.5	22.8
Technicians	9.5	12.8	14.9	13.9	14.3	15.5	17.4	19.4
Computer programmer					16.8	17.6	19.6	20.1
Intermediate skill								
Sales	9.7	9.4	11.8	12.9	14.5	15.7	19.3	23.2
Clerical	8.3	8.4	9.7	10.3	10.7	11.1	12.6	13.9
Craftsman/foreman	10.2	13.4	12.2	14.7	14.4	15.9	15.8	18.3
Low skill								
Operatives	7.8	10.3	8.9	11.9	10.5	13.0	11.6	15.1
Laborers	8.2	10.1	9.0	11.0	11.0	12.1	12.1	14.1
Services	7.4	7.7	8.1	8.8	9.1	9.8	12.0	12.8
Private household	5.8	7.4	6.4	8.4	8.6	7.3	8.5	11.1
Food preparation	7.3	6.9	7.4	8.2	9.4	8.6		
Cooks	7.2	7.0	8.7	7.8	9.0	9.3		
Janitors	7.7	9.2	8.6	10.1	9.9	11.1		
Health services	7.3	7.3	8.0	8.6	10.2	10.1		
Farming	7.5	9.8	8.1	13.9	9.1	15.4	12.0	20.5

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

NOTE: I means immigrant workers and N means native-born worker. Blank means too few observations to compute a wage.

school dropouts in sales, clerical, and some service occupations, in which immigrant and native-born workers commanded similar wages.

Among lower-skill occupations, the largest differences in hourly wages between immigrant and native-born workers were among operatives, laborers, and janitors, ranging from 10 to 25 percent lower, regardless of level of education. Among high-skill occupations the larger differences were for "other professionals," with immigrants' hourly wages from 10 to 20 percent lower than those of natives. These occupations include lawyers, teachers, professors, and social and religious workers, all occupations that require proficiency in English and which are idiosyncratic to the United States, often requiring certification. Differences in hourly wages for scientific and technical occupations were generally lower. In these occupations, skills acquired abroad are more readily transferable and command of English may not be as critical.

This steady pattern of lower wages for California immigrants relative to California native-born workers is in sharp contrast to the pattern in the rest of the nation. In the latter, immigrants' earnings have typically exceeded those of natives across all levels of educational attainment, although the differentials have narrowed over time (Table 6.5).

What may account for the higher wage gap between immigrants and native-born workers in California than for those with similar levels of education in the rest of the nation? Differentials in human capital such as experience, quality of education, and underemployment of immigrants (i.e., working at occupations requiring less education than they possess) are potential, but unlikely factors.

Take differences in age structure between immigrants and native-born workers and between immigrants in California and those in the rest of the nation—younger workers typically earn less than older workers. In the rest of the nation, the share of immigrants who are less than 24 years old was lower than that of natives, 16 versus 21 percent. In California this pattern is reversed, with the share of young immigrants exceeding that of natives, 22 versus 20 percent. Although consistent with the differential earnings patterns between immigrants and natives in California and those in the rest of the nation, these age structure differentials are relatively small and are likely to make only a small contribution to the earnings differential.

Disparities in the earnings of immigrant and native-born workers may also reflect disparities in quality of education within equivalent years of education. Immigrants are, indeed, more likely to have completed their studies abroad, where educational quality may be perceived to be somewhat lower. In this event, however, we would expect immigrant earnings in the rest of the nation also to be generally lower than the earnings of natives; but as we have seen, that is not the case. At the college graduate level, it could also be that immigrants who have completed a professional college degree abroad may be prevented from working at their profession because they lack the appropriate license to practice in the United States. The literature provides examples of immigrants working at jobs below their formal educational training, such as medical doctors or Ph.D.s trained abroad working as taxi drivers.[9] However, if that were the case, we would expect college-graduate immigrants' earnings to be lower than those of natives in the rest of the nation as well. But, again, that is not the case.

Another potential explanation for such differences may be a more extensive pattern of discrimination against immigrants in California than in the rest of the nation. While we do not rule out the potential existence of wage discrimination against immigrants, we have no grounds to believe that such practices are more widespread or have a greater impact in California than in the rest of the nation.[10] And as we show in the next chapter, employers perceive immigrants to be reliable and willing to work hard.

Other potential factors that may contribute to the higher disparities in wages between immigrant and native-born workers in California than in those in the rest of the nation include a higher proportion of immigrants with low English proficiency and a higher proportion of illegal immigrants. Several studies (e.g., Kossoudji and Cobb-Clark, 1996; Trejo, 1996) report a significant wage penalty for immigrants who speak English poorly.[11] And as noted in Chapter Two, California immigrants are less likely to originate from Europe and the Caribbean, where English is often spoken or taught in school.

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[9] We also show in the next chapter that immigrants with a college education are somewhat more likely to be employed in low-skill, low-wage occupations than natives both in California and in the rest of nation.

[10] The pattern of immigrant earnings exceeding native earnings in the rest of the nation could also be caused by differing distribution of these two groups across areas of high and low cost of living within the rest of the nation. Immigrants are disproportionately concentrated in large metropolitan areas with higher costs of living. We did not investigate this possibility.

Similarly, there is evidence that illegal immigrant workers command lower wages (e.g., Kossoudji and Cobb-Clark, 1996; Heer, 1990) than legal immigrants with similar human capital. And unauthorized immigrants are more concentrated in California than other immigrants: 40 percent of the country's illegal immigrants are estimated to reside in California, compared with 30 percent for other types of immigrants.

Finally, the significantly higher flows of immigrants into California than into the rest of the nation may exercise a larger downward pressure on wages of immigrants in California, a point that we address in Chapter Nine.

Whatever the reasons for the lower costs of immigrant labor in California, it remains that California employers have not had to pay immigrants the "premium" they have to pay native-born workers to work in the state. Table 6.7 shows that, in 1990, the earnings of natives in California were from 15 to 20 percent higher than those of natives in the rest of the nation. California's earnings "premium" for natives has increased since 1970, most particularly during the 1980s and for workers with some college education and for college graduates. The "premium" paid to native workers in California reflects, in part, higher increases in costs of living in the state relative to those in the rest of the nation. The cost of living in California increased during the 1980s by five percentage points more (64 versus 59 percent) than that in the rest of the nation.

California employers have not paid a similar premium to immigrant labor. Not only have the earnings of California immigrant workers remained lower than those of California native-born workers, they

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[11] Estimates of the wage penalty for not speaking English, or speaking it poorly, vary between 10 to 17 percent.

Table 6.7

Ratio of California Workers' and Other U.S. Workers' Weekly Earnings, by Educational Attainment and by Immigration Status, 1960–1990

Years of	Immigrant Workers				Native-Born Workers			
Schooling	1960	1970	1980	1990	1960	1970	1980	1990
< 12	1.00	.98	.94	.95	1.25	1.17	1.09	1.15
= 12	.99	.99	1.02	.96	1.16	1.10	1.08	1.19
13–15	.93	.96	1.04	1.09	1.10	1.09	1.11	1.20
16 +	.91	.91	.92	.99	1.07	1.07	1.10	1.17

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

NOTE: Ratios are those of earnings of California's, with the characteristics given, to earnings of residents in the rest of the nation, with the same characteristics.

have also remained lower than earnings of immigrants in the rest of the country (Table 6.7). These earnings differences between immigrants in California and those in the rest of the nation have increased over time among those with less than 12 years of schooling, as would be expected due to the disproportionate increase in the size of this segment of the labor force in California. The reverse has occurred for immigrants with some college and for college graduates; i.e., there has been convergence over time in earnings between college graduate immigrants in California and those in the rest of the nation, and, by 1990, earnings of California immigrants with some college education exceeded those of immigrants in the rest of the nation.

CONCLUSIONS

From 1960 to 1995, immigrants have been entering a California economy that has been changing in two significant ways. First, the rate at which the state's economy has created new jobs has steadily declined, from 42 percent during 1970–1980 to 32 percent during 1980–1990 and then to a negative rate during California's five-year-long recession, the deepest in 60 years. Vigorous net job growth in California has resumed in 1996, but projections are that the rate of employment growth of California will be about half of the rates that prevailed during 1970–1990. The second significant trend is that the net new jobs created by the California economy are increasingly filled by workers with an education that includes at least some college. In the 1960s, half of the net new jobs were filled by workers with at least some college. In the 1980s, 95 percent of the net new jobs were filled by such workers. Furthermore, no new net jobs filled by high school dropouts were created by the California economy during the 1960–1990 time period, and there were only 1 million out of 9 million total jobs filled by high school graduates. This latter trend may in part be due to educational inflation, as employers increasingly require a set of cognitive/social skills that are not systematically acquired at the secondary level of education.

By contrast, immigration trends have moved in the opposite direction. The number of immigrants entering the California economy has steadily increased in every decade. Immigrants constituted only one out of every ten new entrants in the labor force during the 1960s but they constituted only one out of every two new entrants in the 1980s. During the 1990–1995 recession, immigrants continued to enter California at the same pace as they did during the 1980s. And although immigrants with all levels of education have entered the economy, there has been a steady decline in the educational attainment of immigrants *relative* to native-born workers. By 1990, newly arriving immigrant workers were four times more likely to have less than 12 years of education than native-born workers, compared with two times more likely 20 years earlier. In 1990, immigrants constituted 60 percent of all workers with less than 12 years of education. As will be shown in the next chapter, these less-educated young immigrants have been primarily "backfilling" the stagnant number of low-skill jobs vacated by retiring native-born older workers or native-born workers moving up the occupational ladder. California has also continued to receive a sizable and growing number of immigrant workers with a college education, but their share relative to natives has declined.

Trends in the California economy in large part mirror those in the rest of the nation, with one exception. Whereas the number of jobs held by high school dropouts has remained stagnant in California since 1960, it has been halved in the rest of the nation. The large influx of less-educated immigrants to California appears to have slowed adjustments in the low-skill segment of the economy *relative* to that in the rest of the nation. In addition, the relative importance of immigration in the rest of the nation has been significantly less than that in California. While immigrants have increased their share in California's labor force from 10 percent in 1960 and 1970 to 26 percent in 1990, they have increased their share in the rest of the nation's labor force from only 6 to 7 percent. And, in contrast to that in California, there has been no deterioration in the educational attainment of immigrants relative to native-born workers in the rest of the nation. In short, California immigrants are significantly less educated than native-born workers, whereas they are only *slightly* less educated in the rest of the nation.

To California employers, immigrant workers constitute a cheaper source of labor than native-born workers, across all levels of education including college graduates and across nearly all occupations. Disparities between immigrant and native-born workers have increased over time, except for college graduates. This earnings pattern is in contrast with the pattern in the rest of the nation, where immigrants typically have higher earnings than native-born workers. Several factors may account for this differential pattern between California and the rest of the nation, including a younger age structure and a higher proportion of illegal and low-English-proficiency immigrants. It may also be due to a depressing effect on wages of immigrants as a result of the higher rate of immigration in California than in the rest of the nation. We address this issue in Chapter Nine.

Chapter Seven

THE CHANGING ROLE OF IMMIGRANTS IN THE ECONOMY

As the share of immigrants in the California labor force rose from 10 percent in 1960 to 25 percent in 1990 and their educational attainment relative to native-born workers lagged, the role of immigrants in the California economy has also evolved. This chapter focuses on changes in the distribution of immigrants and natives across occupations and industries. The first section examines changes in the occupational distribution of immigrants and in the division of labor between immigrants and natives. Changes in the distribution of immigrants across major industries of the California economy are examined in the second section. The long-term implications of these changes are discussed in the last section.

OCCUPATIONAL CHANGES

Over time, immigrants have increased their share in every occupation in California, although not evenly. They are increasingly filling a stagnating number of low-skill jobs—especially in occupations where communication skills and English proficiency are not critical to the job—as the increasingly higher level of education of native-born workers allows them to fill the growing number of skilled jobs. Immigrants are also less likely than natives to work in high-skill occupations requiring certification. Overall, however, we find no evidence of occupational segmentation between immigrants and natives who have similar levels of education.[1]

Occupational Shifts in California's Economy

As California's economy has shifted from manufacturing to services, there has been a steady increase in the proportion of workers in high-skill occupations (Table 7.1). The share of workers in managerial, professional, and technical occupations has increased from one in every five workers in 1960 to one in every three workers in 1990. At the same time, the proportion of operatives and laborers has declined from 20 to 15 percent. And the share of the work force in farming occupations has declined from 3.9 to 1.8 percent.

Over the 1960 to 1990 time period, there has also been a convergence between the distribution of California's workers by occupations and that in the rest of the nation. In 1960, California workers were 20

Table 7.1

Distribution of Labor Force by Occupation, in California and the Rest of the Nation, 1960–1990
(in percentage)

	California				Rest of the Nation			
Occupation	1960	1970	1980	1990	1960	1970	1980	1990
Executive, professional, and technical	22.4	24.6	29.3	33.9	18.6	21.1	26.1	31.4
Sales and clerical	23.3	25.7	27.2	25.8	20.9	23.1	25.0	25.0
Precision workers	14.2	12.1	11.1	10.0	13.6	13.1	12.4	10.6
Service occupations	10.6	11.7	12.9	12.6	11.1	11.8	13.5	13.8
Operatives and laborers	20.1	17.1	16.7	15.0	24.5	21.3	20.1	16.7
Farm workers	3.9	2.0	2.0	1.8	6.1	3.0	2.2	1.6
All others	5.4	6.8	0.7	1.0	5.1	6.6	0.7	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: U.S. Department of Commerce, 1960, 1970, 1980, 1990.

NOTE: Individual items may not add to 100 percent because of rounding.

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[1] Card (1996) examined the extent to which immigrants and natives work in similar occupations and reached a similar conclusion for the nation as a whole.

percent more likely to be working as managers, professionals, or technicians than workers in the rest of the nation. By 1990, California workers were still more likely to be working in those occupations, but the difference had been cut by more than half. At the same time, the differential between California and the rest of the nation in the share of operatives and laborers was cut by more than 60 percent, from 4.4 percent to 1.7 percentage points.

These occupational shifts are due, in part, to a decline in the number of jobs requiring low levels of education and a rapid growth of jobs requiring at least some college education, trends that have been less pronounced in California than in the rest of the nation, as was shown in the previous chapter.

Together, these trends suggest that the disproportionately large immigration to California has led to a "downskilling" of the California economy *relative* to that of the nation. Although notable, however, this process has been slow and, to date, has led toward a convergence in California's occupational distribution with that of the rest of the nation.

Immigrant Workers Replace Native-Born Workers in Low-Skill Occupations

If most newly created jobs were filled by college-educated workers, as shown in the previous chapter, and the majority—57 percent—of immigrants who entered over the past three decades were not college educated, where did they work? Table 7.2 shows that, in California, immigrants have filled jobs once primarily filled by native-born high school dropouts. Whereas in 1970, immigrants filled 15 percent of the 2.6 million jobs held by high school dropouts, they filled more than 60 percent of the (lesser) 2.4 million such jobs in 1990. They also filled about 66 percent of the newly created jobs filled by high school graduates. The contribution of immigrants to filling newly created jobs filled by college-educated workers has been much lower, about 50 percent of immigrants' contribution to the overall growth of the labor force.

The disproportionate replacement of native-born workers by immigrants in jobs filled by high school dropouts in California contrasts

Table 7.2

Number of Jobs Created and Filled by Immigrants, by Level of Education, in California and the Rest of the Nation, 1970–1990

	Jobs Filled by Immigrants, California			Jobs Filled by Immigrants, Rest of the Nation		
Education (years)	Net New Jobs (thousands)	Number (thousands)	Percentage	Net New Jobs (thousands)	Number (thousands)	Percentage
< 12	16	1,047	(a)	-13,022	287	(b)
12	1,034	658	64	11,885	1,213	10
13–15	3,420	681	20	22,385	1,302	6
16 +	2,488	614	25	15,202	1,390	11
Total	6,960	3,001	43	36,450	4,192	11

SOURCE: U.S. Department of Commerce, 1970 and 1990.

[a] Immigrants filled 52 percent of jobs previously held by native-born workers.

[b] Immigrants filled less than 2 percent of jobs previously held by native-born workers.

sharply with the pattern found in the rest of the nation, adding another dimension to the uniqueness of the interaction between immigration and the economy in California. Whereas the California economy has maintained a stable number of jobs filled by high school dropouts by replacing native-born workers with lower-cost immigrants in these jobs, the economy of the rest of the nation has been shedding half of these jobs and immigrants have replaced only a small percentage—3 percent—of native-born workers in the remaining jobs. And whereas 58 percent of immigrants in California who came during the 1970–1990 period filled jobs held by non-college-educated workers, only 35 percent of immigrants in the rest of the nation filled such jobs, about the same proportion as natives.

This contrast between the role of immigrants in the California economy compared with that in the rest of the nation is even sharper when looking at the proportion of jobs filled by immigrants with a college education. In California, 43 percent of immigrants who entered the labor force between 1970 and 1990 filled such jobs. In the rest of the nation, about 64 percent of immigrants filled such jobs.

Although immigrants are now holding an increasingly larger share of jobs held by non-college-educated workers, it does not mean that immigrants have been displacing native-born workers from these jobs. As noted in the previous chapter, an increasingly larger share of new entrants in the labor force who are natives have entered the labor market with some college education. Hence, what this pattern suggests is a dynamic labor market within which immigrants are filling jobs vacated by older native-born workers lacking a college education at the same time as younger college-educated native-born workers fill the increasing number of newly created jobs demanding such an education.

This dynamic process is illustrated in Table 7.3, which shows changes from 1970 to 1990 in number of adults age 16 to 64 by level of education. The table contrasts these changes with the changes in the number of total net new jobs and the number of these new jobs filled by native-born workers, also by level of education. Several observations can be made from the table.

First, it shows that the number of native-born adults with less than 12 years of education declined by 1.7 million persons, compared with a decline in the number of jobs they held of about 1 million. This suggests that the number of native-born workers who retired or moved to other states during those years exceeded the number of jobs that were filled by immigrants. This, in turn, reflects the steady increase in the labor force participation of native-born women.

Table 7.3

Changes in Total Number of Jobs and Jobs Filled by Changes in the Number of Native-Born Adults, by Level of Education, in California, 1970–1990

Level of Education (years)	New Jobs (thousands)	Jobs Filled by Native-Born Workers: Number (thousands)	Jobs Filled by Native-Born Workers: Percentage of Net New Jobs	Native-Born Workers Age 16–64 (thousands)
< 12	.16	–1,031	(a)	–1,661
= 12	1,034	377	36	131
13–15	3,420	2,769	81	3,082
16 +	2,488	1,874	75	1,923
Total	6,960	3,989	57	3,475

SOURCE: U.S. Department of Commerce, 1970 and 1990.

[a] Immigrants have filled these jobs.

Second, the number of native-born adults who were high school graduates increased by only 131,000 between 1970 and 1990, but their number holding jobs increased by three times this number. Again, this reflects the steady increase in the labor force participation of native-born women.

Third, the bulk of the net increase in the number of adults age 16 to 64 during that period is accounted by persons with some college education or college graduates.

Fourth, the table shows that, overall, a larger number of jobs, in excess of 500,000, were filled by native-born adults than the number of native-born adults who were added to California's population. This is accounted for by the growth in the labor force participation of native-born women during this period of time.

Still, a sizable share of native-born young adults who, from year to year, enter the labor market do not go to college. Because of the stagnation in the number of jobs accessible to them, these native-born workers may find themselves in increasing competition with immigrants, an issue that is explored in detail in Chapter Nine.

Increased Concentration of Immigrants in Low-Skill Occupations

As a result of the above trends, the concentration of immigrants in low-skill occupations has increased significantly in California relative to native-born workers, while it has decreased in high-skill occupations. Figure 7.1 displays the 1960 to 1990 changes in the share of immigrants by occupations. It also displays the 1960–1990 change in the immigrant concentration index[2] in each of twelve major occupations. A change index of less than one indicates that the concentration of immigrants in an occupation has declined over time, and a change index of more than one indicates the reverse trend.

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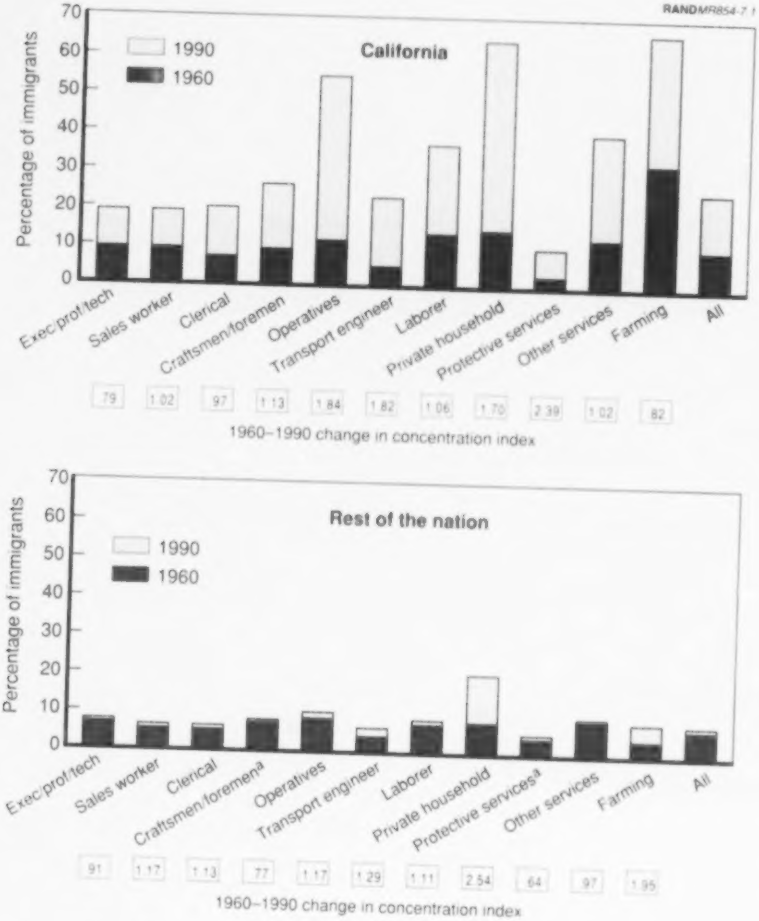
[2] The immigrant concentrations index in a specific industry is the ratio of the share of all immigrants working in that industry to the share of all workers working in that industry. A ratio greater than one indicates immigrants are more concentrated in that industry than are workers as a whole.



SOURCE: U.S. Department of Commerce, 1960 and 1990; and Appendix Table C.3 of this report.

[a]These two occupations experienced a decline in their gross share of immigrants in the rest of the nation.

Figure 7.1—Share of Immigrants by Occupation, in California and the Rest of the Nation, 1960 and 1990

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California immigrant workers have been, and continue to be, highly concentrated in low-skill occupations, primarily in the operative, private household, farming laborer, and other service occupations. The relative concentration of immigrants in these five occupations has increased over time by a relatively low 2 percent in "other services" to a high 84 percent in operative occupations. The reverse trend has taken place in high-skill occupations, in which the relative concentration of immigrants has declined over time, most particularly in managerial, professional, and technical occupations. The relative concentration of immigrants in these occupations has declined by 21 percent from 1960 to 1990.

A similar pattern is apparent for the rest of the nation, although clearly immigrants have been consistently more evenly distributed across occupations than those in California. In addition, immigrants contribute a significantly lower share of the labor force in every occupation in California.

A growing disparity in the occupational distribution between immigrant and native-born workers in California has resulted from this shift. Table 7.4 shows that the share of all immigrants working in the lowest-skill occupations—operatives, laborers, and services—did not change markedly. By contrast, the share of natives working in these

Table 7.4

Share of Labor Force by Occupation and by Immigration Status, in California and the Rest of the Nation, 1960–1990 (in percentage)

	California		The Rest of the Nation	
Occupation	1960	1990	1960	1990
Management and professional[a]				
Immigrants	18.9	22.8	22.3	29.5
Natives	22.8	37.7	18.6	31.6
Operatives, laborers, services[b]				
Immigrants	47.2	43.0	44.0	36.8
Natives	29.8	18.3	38.4	26.1

SOURCE: U.S. Department of Commerce, 1960 and 1990.

[a] Includes managerial, professional, and technical occupations.

[b] Includes operative, laborer, private household, other services, and farming occupations.

occupations declined from 30 to 18 percent. A reverse pattern is evident in high-skill occupations—management, technicians, and professionals; again, the share of all immigrants working in these occupations has increased five times less than for native-born workers.

Trends in the rest of the nation differ once again, underlying the significantly higher educational level of immigrants residing in other parts of the country. Indeed, in 1960 a higher proportion of immigrants (22 percent) were in high-skill occupations than native-born workers (19 percent). By 1990, the share of immigrants in these occupations had increased only slightly less than for natives, to 30 and 32 percent, respectively. At the lower end of the occupational skill distribution, the pattern was similar, with immigrants augmenting their share relative to natives, but to a significantly lesser extent than that experienced in California.

"Division of Labor" Between Native-Born and Immigrant Workers

The relative concentration of immigrants in low-skill occupations reflects the lower education of immigrants. Table 7.5 shows that the distribution of immigrants by occupations is broadly similar to that of native-born workers after controlling for education. It also shows that within a given level of education, natives were consistently more likely than immigrants to be employed in an occupation requiring communications skills, proficiency in the English language, and/or certification for certain professional services. These differences in "division of labor" within a specific level of education are larger at the lower levels of education than at higher levels of education.

Consider first workers with less than 12 years of education. At this educational level, two out of three immigrants worked in lower-skill occupations, compared with about one of every two native-born workers. A closer look indicates that the bulk of this differential is due to a higher percentage of immigrants working in operative and farming occupations and an almost equally larger proportion of natives working in sales and clerical occupations. The first two occupations are "backroom" occupations that do not require contact with clients or the public; sales and clerical occupations require such

Table 7.5

Distribution of Labor Force by Occupation, Education, and Immigration Status, in California, 1990

	Labor Force (percentage)							
	< 12		= 12		13–15		16+	
	I	N	I	N	I	N	I	N
High Skill								
Executives, administrators, management	3.1	6.4	7.9	11.8	13.1	17.0	18.5	22.5
Professionals	1.1	2.0	3.4	4.4	10.5	11.9	39.0	46.3
Engineers	0	0	.2	.4	1.1	1.4	8.8	5.7
Math, computers	0	0	.1	.2	.4	.7	2.5	2.0
Health professionals	.1	.1	.4	.3	2.2	2.1	7.0	6.8
Other professionals	1.0	1.9	2.4	3.5	6.8	6.5	20.7	31.8
Technicians	.5	.8	1.3	1.8	4.1	3.6	4.9	2.9
Computer programmers	0	.1	.1	.1	.6	.6	2.2	1.4
Subtotal	4.7	9.2	12.6	18.0	27.7	32.5	62.4	71.7
Intermediate Skill								
Sales	2.2	6.1	5.0	6.8	6.8	8.5	6.1	8.3
Clerical	6.0	16.7	17.7	25.3	24.9	25.6	13.5	9.6
Craftsmen/foremen	12.2	13.3	12.8	15.1	10.3	10.7	3.5	2.6
Subtotal	20.4	36.1	35.5	47.2	42.0	44.8	23.1	20.5
Low Skill								
Operatives	24.3	10.3	16.6	7.5	8.5	3.5	3.3	.8
Laborers	11.3	9.0	6.4	6.0	3.3	3.3	1.1	.8
Services	22.3	23.1	20.8	15.7	13.9	11.7	6.1	3.8
Private household	2.8	1.2	1.8	.5	.8	.3	.3	.1
Food preparation	4.6	6.4	4.4	3.1	3.1	2.3	1.1	.6
Cooks	4.8	3.7	3.9	1.4	1.7	.7	.6	.1
Janitors	7.1	5.2	5.0	2.9	2.4	1.3	.9	.3
Health services	1.1	2.0	1.9	1.7	2.1	1.5	1.3	.4
Farming	10.0	2.0	2.4	1.1	.8	.8	.3	.5
Subtotal	67.9	44.4	46.2	30.3	26.5	19.3	10.8	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: U.S. Department of Commerce, 1990.

NOTE: I means immigrant workers and N means native-born workers. Columns may not add to 100 percent because of rounding.

contact in addition to a command of the English language, most particularly for clerical work. And it is in the latter occupation that the largest discrepancy between immigrants and natives is seen. Native-born workers are more likely to work in sales and clerical occupations than as operatives, not because they earn more but because they may choose to do so or because employers prefer employing immigrants as operatives. For instance, the average native-born worker with less than 12 years of education received a lesser $8.40 per hour in 1990 working in a clerical occupation than the $10.30 per hour working as an operative (see Table 6.6 in Chapter Six). For immigrant workers with less than 12 years of education, the relationship in the average hourly wage between these two occupations was reversed, the immigrant worker was paid about the same as an operative ($8.30) and as a clerical worker ($7.80). In both instances, however, the immigrant worker was paid less than the native-born worker, with the wage gap larger for operatives than clerical workers. The differential pattern between immigrant and native-born workers in these occupations is even more pronounced among workers with 12 years of education. Whereas a native-born high school graduate was paid a lesser $10.30 per hour as a clerk than the $11.90 per hour as an operative, an immigrant high school graduate would be paid a higher $9.70 as a clerk than the $8.90 an hour as an operative.

Now consider college graduates. Two main differences in the occupation distribution between immigrants and native-born workers are notable in Table 7.5. First, immigrants are more likely to be employed in low-skill occupations than natives, notwithstanding that a small proportion of both groups do so, 11 percent versus 6 percent, respectively. And second, immigrants are less likely to be employed in "other professional" occupations than natives and more likely to work in scientific and professional occupations, including engineering, health, and computer-related occupations. This pattern is consistent with immigrants having more difficulties accessing occupations that require a knowledge of institutional norms in the United States. "Other professional" occupations include primarily lawyers, teachers (K–12 and postsecondary), and social and religious workers, all occupations that are idiosyncratic to the United States, often requiring certification and/or special knowledge that require years of study and are costly to acquire for an adult newcomer.

In contrast to the marked differences in occupational pattern between immigrant and native-born workers noted above for high school dropouts and college graduates, there are no marked differences in the occupational distribution between immigrant and native-born workers with some college, or a high school diploma only. The one exception is that immigrant high school graduates are more likely to work as operatives or in services occupations than are native-born workers, who, in turn, are more likely to work in clerical occupations.

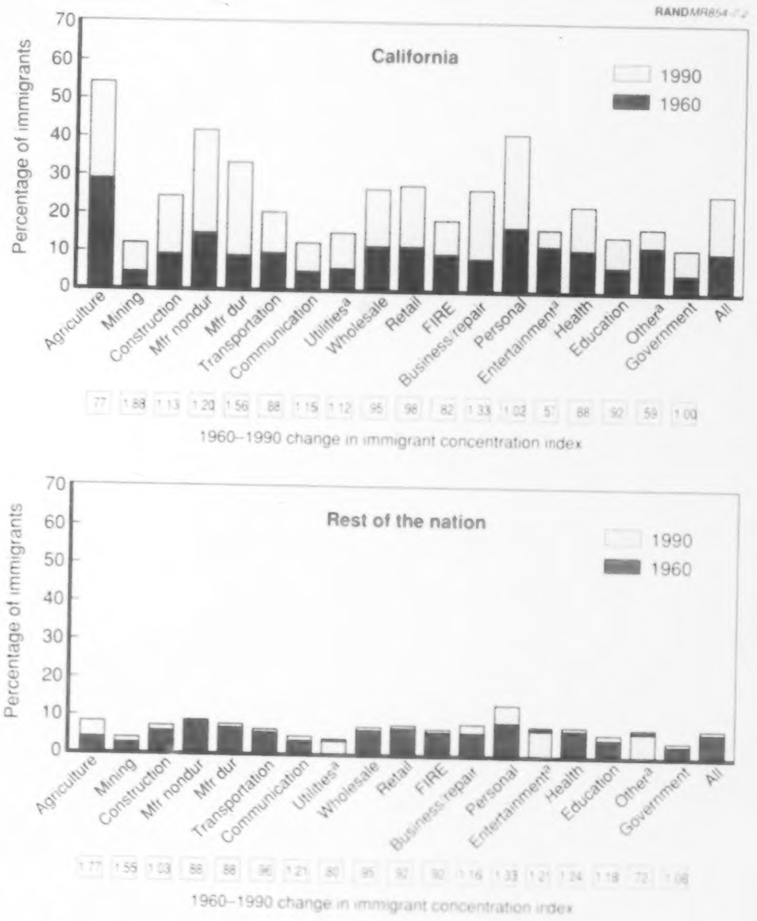
The one constant difference in the occupational distribution between immigrant and native-born workers *within* each level of education, including college graduate, is the lower share of immigrants in executive and management positions.

INDUSTRIAL CHANGES

The steady continuing shift of California's economy from durable and nondurable manufacturing toward finance, insurance, real estate, and other professional and health services was documented in Chapter Six. By and large, the distribution of immigrants across sectors of the California economy has mirrored this trend.

Presence of Immigrants in All Sectors of the Economy

Just as it did for all occupations, the share of immigrants has increased in all major industries of the California economy. In this case, however, the growth in the proportion of immigrants in an industry has been generally proportional to the relative growth of that industry. Figure 7.2 shows that the 1990 distribution of immigrants across California's main industries has remained relatively the same as in 1960. Where immigrants were disproportionately concentrated in 1960, such as in manufacturing, personal services, and agriculture, they continued to be so in 1990; indeed, the share relative to native-born workers increased in the first two industries, as indicated by a ratio of their 1960 concentration index to their 1990 concentration index greater than 1.0—1.2 and 1.56, respectively. And in industries where they were underrepresented in 1960—education, government, communications, and other professional—they continued to be so in



SOURCE: U.S. Department of Commerce, 1960 and 1990; and Appendix Table C.4 of this report.

[a] These sectors experienced an absolute decline in the share of immigrants in their labor force.

Figure 7.2—Percentage of Immigrants by Major Sectors of the Economy, in California and the Rest of the Nation, 1960 and 1990

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1990, with little change in their overall concentration index. These industries disproportionately employ professionals typically requiring certification of specific "American" training and education, skills that immigrants are less likely to possess, as noted above.

In most other major sectors, including construction, retail and wholesale trades, health, business, and repairs, the share of immigrants has remained generally proportional to the share of immigrants in the overall economy.

Industries Highly Dependent on Immigrants

These aggregate trends, however, mask the fact that, over time, a few specific industries, mostly agricultural and some manufacturing industries, have come to be dominated by immigrant labor. These include industries that are often referred to as such in the popular press, including such sizable industries as textile and apparel, work in private households, landscaping, and perishable agricultural products. The share of immigrants range from 75 percent for the textile and apparel industries to 53 percent in the landscaping industry, employing from 73,000 to 180,000 immigrants each. Immigrant-labor-dependent industries also include much smaller industries such as furniture and fixtures, services to dwellings and other buildings, and the shoe repair industries (Table 7.6). However, as dependent on immigrant labor as these industries have become, they account for a small 8 percent of total employment, and together they employ a small share of all immigrants—18 percent in 1990, down from 19 percent in 1970.

Larger numbers of immigrants are working in other industries, including "high-skill" service industries such as banking, business services, hospitals, and even government. These industries' share of immigrant labor is typically lower than the share of immigrant labor in the state economy at large (25 percent), but they are large industries. They also include medium-sized service industries that have a relatively high share—38 to 44 percent—of immigrant labor, such as hotels and motels, automobile services, eating and drinking establishments, and one manufacturing industry—electrical machinery. In addition, they include construction, which employed some 250,000 immigrants in 1990, the second largest number of immi-

Table 7.6

California Industries with the Highest Proportion and Largest Number of Immigrants, 1990

Industries with Highest Proportion of Immigrants				Industries with Largest Number of Immigrants			
Industry	SIC[a] Code	Percentage of Immigrants	Number of Immigrants	Industry	SIC[a] Code	Percentage of Immigrant	Number of Immigrants
Textile mills and apparel products	132–152	75	139,262	Eating, drinking places	641	39	283,100
Leather and leather products	220–222	68	5,380	Construction	066	24	253,300
Watches, clocks, devices	381	64	475	Hospitals	831	25	138,800
Agriculture production, crops, livestock	010–011	61	180,300	Electrical machinery	340–350	37	129,600
Private households	761	59	71,900	Health offices and clinics	812–830	20	97,500
Shoe repair shops	782	57	1,600	Grocery and food stores	550	25	95,300
Dressmaking shops	790	57	2,800	Business services	731–741	19	88,300
Furniture and fixtures	242	55	37,800	Primary and secondary schools	842	12	84,800
Landscape and horticulture services	020	53	73,700	Banking, savings, credit agencies	700–702	22	80,900
Laundry, cleaning and garment services	771	51	29,800	Hotels, motels	762	44	72,000

Table 7.6—continued

Industries with Highest Proportion of Immigrants				Industries with Largest Number of Immigrants			
Industry	SIC[a] Code	Percentage of Immigrants	Number of Immigrants	Industry	SIC[a] Code	Percentage of Immigrant	Number of Immigrants
Rubber and plastics products	210–212	50	28,500	Public administration	900–932	11	70,900
Apparel, fabrics, and notions (wholesale)	542	50	12,100	Automobile services	742, 750–1	36	69,200
Food and food preparation	100–102, 111/121–2	48	56,700	Real estate	712	18	64,100
Services to dwellings and other buildings	722	46	56,000				
Total		58	696,317	Total		20	1,299,830
Percentage of total employed		8	18	Percentage of total employed		43	34

SOURCE: Department of Commerce, *Public Use Sample*, 1990.

[a] SIC is Standard Industrial Classification.

grants after eating and drinking establishments. The "dependence" of the construction industry on immigrant labor has increased rapidly, most particularly during 1980–1990, when construction's share of immigrant labor doubled from 12 to 24 percent.

These patterns of variation across industries in their dependence on immigrant labor, in turn, reflect the combination of two trends. The first is simply that the number of college-educated immigrants has increased, even though their rate of increase has been slower than that for less-educated immigrants (see Chapter Six). And the second, as we have seen above, is that less-educated immigrants are filling jobs previously held by native-born workers in low-skill occupations still needed by even high-skill industries.

This trend is illustrated in Table 7.7, which shows the number of jobs created or lost from 1970 to 1990, in total and by level of education of the labor force, and the number of those jobs filled by immigrants (rows in italics) in selected mostly-service high-skill industries. These industries account for one-third of the total net new jobs added by the California economy between 1970 and 1990. The table shows that nearly all of these industries lost jobs filled by high school dropouts despite vigorous overall growth. Government accounted for 45,000 and hospitals 19,000 of the total nearly 70,000 jobs lost to high school dropouts by these industries. Even the electric machinery industry, the only manufacturing industry in this group, lost 7,000 such jobs. At the same time, the number of immigrants in these jobs has increased in every industry. For instance, from 1970 to 1990, the electric machinery industry added 131,000 jobs filled by college-educated workers but lost 3,000 jobs filled by workers with a high school diploma only. And government added 300,000 jobs filled by workers with some college education while shedding 51,000 jobs filled by high school graduates. Overall, of the total 2.2 million jobs created by these 10 industries during 1970 to 1990, 96 percent were filled by workers with at least some college education, and the remainder were filled by high school graduates.

In spite of the net loss of 70,000 jobs available to high school dropouts, 90,000 of the remaining jobs in these industries were filled by immigrants with less than 12 years of education replacing native-born workers who previously had filled these jobs. While nearly all industries included in Table 7.7 continued to generate jobs for high school graduates, these jobs constituted less than 5 percent of their job growth. In addition, three out of every four of these jobs were filled by immigrants. By contrast, 21 percent of the new jobs filled by workers with at least some college education were filled by immigrants.

"Division of Labor" Within Sectors

In all sectors, immigrant and native-born workers fill jobs side by side, but their role within a sector is all the more differentiated the

Table 7.7

Change in Total Number of Jobs and in Immigrant-Held Jobs, by Selected High-Skill Industries and Level of Education, in California, 1970–1990

	Level of Education (years)			
Industry	Total	<12	12	13+
Hospitals	303,867	–18,882	9,567	313,182
	110.431	*+13,527*	*13,570*	*83,334*
Electric machinery	121,250	–7,402	–2,729	131,381
	105,569	*25,868*	*24,347*	*55,354*
Health offices and clinics	301,503	–1,154	36,742	265,915
	79,310	*8,219*	*14,289*	*56,802*
Business services	315,812	11,642	54,309	249,861
	76,029	*14,623*	*14,596*	*46,810*
Primary and secondary schools	282,064	–14,320	34,839	261,545
	64,563	*7,034*	*13,049*	*44,480*
Banking, savings, and credit agencies	224,734	–1,246	19,550	206,430
	61,974	*+1,598*	*8,985*	*51.391*
Public administration	205,391	–44,791	-50,559	300.741
	53,432	*+2,420*	*6,344*	*44,668*
Real estate	237,193	–1,789	30,298	208,684
	52,557	*5,868*	*8,359*	*38,330*
Entertainment	186,456	8.176	27,861	150,419
	38,863	*11,433*	*10,046*	*17.384*
Total	2,176,000	-69,766	159,878	2,088,158
	642,728	*90,027*	*113,585*	*438,553*

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970 and 1990.

NOTE: Numbers in Roman indicate total change in number of jobs between 1970 and 1990. Numbers in italics indicate the number of those jobs held by immigrants.

lower skill the sector is. We grouped sectors into three groups, low skill, medium skill, and high skill, according to the average years of schooling of their overall labor force (Table 7.8). In low-skill sectors, which account for 20 percent of the state's economy (agriculture, construction, nondurable manufacturing, and personal services), there is a sharp split between immigrant and native-born workers: the former average 8.6 years of education whereas the latter average 12.7 years of education, a 4-year difference. Immigrants in these sectors are four times more likely to have less than 12 years of education than native-born workers. This split is often referred to as less-educated immigrants forming the bulk of the labor force in the "back office" while higher-educated native-born workers occupy the "front office." In 1990, two out of five workers in these sectors were immigrants, up from *one out of six* workers in 1970. In 1990, these low-skill industries employed 28 percent of all immigrant workers, down from 30 percent in 1970.

By contrast, in high-skill sectors, which account for the highest one-third of the state's economy (communications, FIRE, health, education, other professional, and government), immigrant and native-born workers are "integrated" at all skill levels. In these industries, immigrants are just as likely to be college educated and there is little difference in the average years of schooling between the two groups, 13.5 and 14.1 years, respectively for immigrants and natives. One out of six workers in these sectors was an immigrant in 1990, compared with one in twelve in 1970. These high-skill sectors employed 22 percent of all immigrant workers in 1990, just as they did in 1970.

The "division of labor" in the remaining, medium-skill, industries fall in between these two extremes. In these industries, immigrants are just as likely to be college educated as native-born workers, but three times more likely to have less than 12 years of education. These industries employ half of the native-born labor force as well as half of the immigrant labor force in the state.

CONCLUSIONS

As immigrants have increased in numbers, they have also increased their presence in all occupations and all industries in the California

Table 7.8

Educational Distribution of the Labor Force, by Type of Industry and Immigration Status, in California, 1990

	Mean Number of Years			Less than 12 Years (%)			More than 16 Years (%)			Percentage of Total	Share of	Percentage of all
Industries	All	I	N	All	I	N	All	I	N	Employment	Immigrants	Immigrants
Low skill[a]	11.0	8.6	12.7	33	57	15	13	7	17	19.2	40.2	28.0
Medium skill[b]	12.7	11.2	13.2	15	33	10	20	18	21	47.9	23.4	49.7
High skill[c]	14.0	13.5	14.1	5	11	4	38	39	38	32.9	15.5	22.3

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1990.

NOTE: I means immigrant worker, and N means native-born worker.

[a] Includes agriculture, construction, nondurable manufacturing, and personal services.

[b] Includes durable manufacturing, transportation, utilities, wholesale and retail trade, business/repair, and entertainment.

[c] Includes communications, FIRE, health, education, other professional, and government.

economy. At the same time, as the education of native-born workers has increased much more rapidly than that of the new-entrant immigrants, the latter have not only filled most of the few low-skill jobs created between 1970 and 1990, but they also have begun to backfill vacancies in those jobs.[3] As a result, the concentration of immigrants in low-skill occupations has increased significantly relative to that of native-born workers, while it has decreased in high-skill occupations. This is leading to a growing disparity in the occupational distribution between immigrants and natives. This disparity between immigrant and native-born workers is particularly sharp in lower-skill sectors—including agriculture, nondurable manufacturing, construction, and personal services. In these sectors, immigrant and native-born workers are separated by more than a four-year differential in education. Immigrants provide the majority of the lower-skill labor whereas native-born workers provide the supervisory and higher skilled labor.

In contrast, immigrant and native-born workers in high-skill industries have similar educational characteristics, although they differ somewhat in their occupational distribution. Immigrants are less likely than natives to work in occupations requiring knowledge of U.S. institutional norms and/or certification, such as lawyers, teachers, and social and religious workers, and are more likely to work in scientific and professional occupations, including engineering, health, and computer-related occupations. Immigrants are also less likely than natives to work in occupations that require proficiency in the English language, such as sales and clerical occupations. Overall, we found no evidence of marked occupational segmentation between immigrant and native-born workers in the California economy.

We also showed that the growth in the number of jobs that have been disproportionately filled by immigrants has constituted less than 15 percent.of all net new jobs created during the 1970–1990 time period.

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[3] Although immigrants have filled jobs previously filled by natives, it does not necessarily mean that the latter were displaced by the former. As noted, an increasingly larger share of native new entrants in the labor force had some college education or were college graduates and have filled the higher-skill, higher-paying jobs created by the economy.

The growth of jobs filled by non-college-educated labor is stagnating, and relatively young immigrants are filling 60 percent of all jobs filled by those with less than 12 years of education. These facts suggest that within the next decade or so there will be few jobs left open for non-college-educated new entrants in the labor force, whether foreign or native born. Indeed, California is significantly lagging behind the rest of the nation in the rate at which the number of its jobs filled by high school dropouts is declining. If not addressed in years to come, this widening gap between the number of jobs available for non-college-educated workers and the increasing number of new non-college-educated immigrants signals growing competition for jobs and, hence, a further decline in relative earnings at the low end of the labor market. The extent to which immigration has already affected the job opportunities and earnings of native-born workers in California is examined in Chapter Nine.

Chapter Eight

IMMIGRANTS' EFFECTS ON THE ECONOMY

The previous two chapters highlighted the growing divergence between trends in the rate and composition of employment growth in the California economy on the one hand and trends in the rate and composition of immigration on the other. Over several decades, these trends have led to a slow and modest downskilling of the California economy *relative* to that of the rest of the nation and to a significant growth in the differences in the overall occupational and industrial distribution of immigrants and native-born workers. The former are increasingly concentrated in lower-skill occupations and industries, and the latter are increasingly concentrated in high-skill occupations and industries. This bifurcation in California is in sharp contrast with a pattern of similarity in the occupational and industrial distribution of immigrants and native-born workers in the rest of the nation. These seemingly contradictory economic and immigration trends raise the question, Are current patterns of immigration flows no longer compatible with an increasingly high-tech service-oriented economy that has expected moderate employment growth?

Answering this question is fraught with problems, not the least of which is the difficulty of observing the adjustments the economy and its labor market would have made in the absence of immigrants.[1]

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[1] Over the 1960–1996 time period, only one industrialized nation, Japan, has seen its economy rise rapidly, while at the same time it permitted no or minimal immigration, including temporary labor. Certainly, low levels of immigration and economic growth are not incompatible. However, in most industrialized West European nations, and in Canada and Australia, economic growth has been accompanied by immigration.

The best that can be done is to observe how the dynamics of the economy, labor market, and immigration have changed together over the last 30 years and infer from these observations the role immigration appears to have played in the California economy over this period. That is what we endeavor to do in this chapter.

MEASURING EFFECTS ON THE ECONOMY

The economic effects of immigration are two-sided, as are the effects of any social and economic phenomenon—some are positive and some are negative. On the one hand, it has long been held by the Council of Economic Advisors and many others that immigrants and the economy have served each other well.[2] Immigrants provide a steady source of motivated, hard-working labor, and they add to the growth of the economy via their consumption of goods and services and the investments they make in new businesses. Immigrants also provide goods and services that otherwise might not be produced, or would be provided in lesser quantity or at a higher price, such as perishable crops, gardening, housekeeping, and baby-sitting. In addition, the apparent willingness of immigrants to work at low wages arguably slows down the exodus of low-skill jobs to the low-wage countries of Latin America and Asia. In addition, immigrants are seen as bringing specific skills that may be in short supply, such as nursing and programming skills, that are helping high-technology industries, such as the health and computer software industry, to remain competitive in the global economy.

On the other hand, the increased availability of low-skill and/or low-wage labor may retard capital and technological investments or other production adjustments that may be needed for the long-term global competitiveness of some industries. Also, immigrants who lack education and knowledge of the English language may be less productive than native-born workers. Finally, the management of a diverse, and multilingual, labor force may be more costly to employers.

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[2] See for instance the *Economic Report of the President* (1986), U.S. Department of Labor (1989); and McCarthy and Valdez (1986).

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These claims and counterclaims are examined in this chapter, which focuses on the relationship between the changing characteristics of California's economy, labor force, and immigration relative to that of the rest of the nation. We address two key questions:

- Have immigrants affected the quality and the costs of labor in California relative to those in the rest of the nation?
- Have immigrants affected the productivity and growth of California industries?

To address these questions, we compare changes over time in the characteristics of the California labor market and in the labor force of specific industries with those that have taken place in the rest of the nation. We seek to determine whether immigrants have provided California employers with a comparative advantage with respect to labor costs, quality, and/or productivity relative to employers located elsewhere. The "rest of the nation," although larger than California, is an appropriate area for comparison because its dependency on immigrants is significantly lower than California's: Its share of immigrants in the labor force has increased a mere one percentage point between 1960 and 1990, from 6 to 7 percent. In California, by contrast, the share of immigrants in the labor force has increased by 16 percentage points, from 10 to 26 percent. If immigrants have any effect in shaping California's economy, it should become apparent in this comparison.[3]

Generally, a firm producing a specific product in location A is said to hold a comparative advantage over a firm producing the same product in location B if, for instance, labor costs in location A are lower than those in location B, all else being equal. This concept of comparative advantage with respect to specific factors of production or quality of life can be extended to a state. For instance, it has been suggested that California provides agricultural growers located in the state with a comparative advantage because of this state's favorable weather and land availability. Similarly, it has been suggested that the Silicon Valley in Northern California provides high-tech firms

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[3] Similarly, we should not expect to measure major effects of immigration on the national economy as a whole, since immigration is but a small contributor to the increases in its labor force.

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with a comparative advantage over their competitors located elsewhere because of the availability of a large pool of highly educated labor and the economies of scale offered by the concentration of a large number of high-tech firms within a relatively small geographical area.

In this chapter, the focus is on changes in California's comparative advantage with respect to one major factor of production labor. For employers, labor is a major cost, if not *the* major cost of production or service delivery. Hence, availability of labor with the required qualifications, along with its costs, and productivity are key factors in employers' decision to locate or expand at a specific location. Various measures of economic activities and labor market characteristics are used. Change in level of employment in aggregate and across industries[4] is our primary measure of change in levels of economic activity. We also use "value added per employee" and "capital investment per employee" to measure productivity and investments in specific manufacturing industries. Level of education is our primary, although not exclusive, measure of "quality" of the labor force, and "weekly earnings" is our primary measure of cost of labor. The focus is on persons age 16 to 64 in the labor force.

The next section examines how immigration has cumulatively enhanced or eroded California's overall quality, costs, and productivity of its labor force relative to that in the rest of the nation. We then examine whether immigrants have contributed to the disproportionate growth of California's economy.

EFFECTS ON STATE'S COMPARATIVE ADVANTAGE FOR LABOR

In Chapter Six, we showed that the weekly earnings and wages of immigrant labor have remained consistently below those of native-born labor from 1960 to 1990 at all levels of education from high school dropouts to college graduates and in most occupations. Those earnings have been falling not only relative to those of

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[4] Although the industrial classification for the various Censuses are generally aggregates of the Standard Industrial Classification, employment counts by industry may differ across sources because of differences in reported classification by respondents.

California natives but also relative to those of immigrants and natives elsewhere in the United States, at least among less-educated workers. In this section, we examine how immigrants have affected the costs, quality, and productivity of the California labor force as a whole relative to that of the nation.

Relative to that in the rest of the nation, immigration contributed to a decline in the overall costs of California labor through most of the 1960–1990 period (Table 8.1). At the same time, however, immigration contributed to a decline in the level of education of its labor force also relative to that of the nation. Despite that *relative* decline in educational level, labor productivity in California industries has remained above that of the rest of the nation. However, it declined in the later part of the 1980s and in the early 1990s.

Weekly Earnings

Overall, the relative earnings[5] of California workers exhibited a downward trend relative to the earnings of workers outside California between 1960 and 1980, a trend that was reversed during the 1980–1990 decade (Table 8.1). As shown in Table 8.2, the relative decline in weekly earnings has been concentrated among the least educated—dropouts and high school graduates—most particularly

Table 8.1

Trends in Selected Labor Force Indicators, in California Versus the Rest of the Nation, 1960–1990

	Ratio California/Rest of the Nation[a]			
Indicator	1960	1970	1980	1990
Mean weekly earnings	1.20	1.14	1.11	1.18
Mean years of schooling	1.08	1.06	1.02	.99

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, 1990.

[a] The figures in this table represent the value of the indicator in California divided by the value of the indicator in the rest of the nation.

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[5] Here we focus on the changes in earnings between workers in California and those in the rest of the nation (relative earnings), not on changes in real earnings over time for either group of workers.

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Table 8.2

Shifts in Growth of Weekly Earnings, by Immigration Status and by Level of Education, in California Versus the Rest of the Nation, 1960–1990

	Growth Shifts		
Education	1960–1970	1970–1980	1980–1990
Immigrant Workers			
= 12	–0.3	+5.5	-9.0
13–15	+4.2	+14.8	+7.5
16+	–0.6	+0.7	+14.8
Native-Born Workers			
< 12	-10.1	–12.9	+7.5
= 12	–8.4	–2.8	+15.6
13–15	–0.4	+3.4	+14.8
16+	–0.8	+5.2	+12.0
All			
< 12	-9.5	–16.9	–2.4
= 12	-7.9	–2.9	+10.5
13–15	-2.5	+3.9	+13.7
16+	–1.0	+4.2	+10.2

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, 1990.

NOTE: The shift in growth is the growth in weekly earnings in California over a decade minus the growth in weekly earnings in the rest of the nation. A negative sign indicates the earnings in California have grown more slowly than in the rest of the nation. A plus sign means the reverse was true.

among native-born workers. Earnings of California native-born workers declined relative to those in the rest of the nation only for these two groups. California natives with some college education or a college degree did not experience any erosion in their relative earnings during that period; rather, they increased their relative earnings by over 10 percent during the 1980s. Less-educated native-born workers also saw their earnings increase relative to their counterparts in the rest of the nation, but that increase was not sufficient to compensate for the relative decline of the two previous decades.

As a result of these trends, the earnings disparity between less- and more-educated workers has increased steadily since 1960 and accelerated during the 1980s in both California and the rest of the nation (Table 8.3). In California, the ratio of weekly average earnings of college graduates to weekly earnings of high school dropouts increased by 45 percent between 1960 and 1990, from 1.75 to 2.53. Immigrant and native-born workers were similarly affected by the increase in the earnings disparity between more- and less-educated workers, although immigrants were somewhat more affected than natives (49 versus 42 percent).

This widening in the earnings disparity between the less- and more-educated has been well documented at the national level in Mishel and Bernstein's (1994) study of changes in hourly wages from 1973 to 1993. They attribute this increase to the employment shifts from high-wage manufacturing to low-wage service industries (as also noted in Chapter Six), deunionization, trade liberalization, and a

Table 8.3

The Earnings Disparity by Immigration Status, in California Versus the Rest of the Nation, 1960–1990

	Wage Disparity			
Immigration Status	1960	1970	1980	1990
California				
Immigrant workers	1.64	1.84	1.95	2.44
Native-born workers	1.78	1.93	1.93	2.54
All	1.75	1.93	1.97	2.53
The Rest of the Nation				
Immigrant workers	1.79	1.97	2.00	2.34
Native-born workers	2.08	2.12	1.92	2.49
All	2.05	2.11	1.92	2.47
California Ratio ÷ Ratio in the Rest of the Nation				
Immigrant workers	.92	.93	.98	1.04
Native-born workers	.85	.91	1.00	1.02
All	.85	.91	1.03	1.02

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

NOTE: The earnings disparity is measured by the ratio of the weekly earnings of college graduates (16 years of schooling or more) to the weekly earnings of high school dropouts (less than 12 years of schooling). The index of earnings disparity is the ratio of earnings disparity in California divided by the ratio of earnings disparity in the rest of the nation. A ratio of less than one indicates that earnings disparities are lower in California than in the rest of the nation. A ratio of more than 1.0 indicates the reverse.

faltering minimum wage. They also concluded that the increased discrepancy was not due to a "deterioration" of the quality of education, as is often popularly believed (pp. 153 and 201).

Our data suggest that in California at least, immigration has also contributed to the increase in the earnings disparity between those with more and less education through its effects on the earnings of less-educated native-born workers and immigrants alike, as will be shown in the next chapter. Table 8.3 shows that the increase in the earnings disparity in California has been more than twice as large as the increase in the rest of the nation (45 versus 20 percent). Whereas, in 1960, California enjoyed a lower earnings disparity among its workers than in the rest of the nation, that relationship had been reversed by 1980 and has remained so since then.

Both immigrant and native-born workers contributed to the more rapid increase in the earnings disparity within California. The disparity increased by 50 and 43 percent over the 30 year period, respectively, compared with 30 and 23 percent, respectively, in the rest of the nation.

Education

The California labor force's comparative advantage of nearly one year of schooling steadily eroded since 1960, and by 1990 it had become a deficit of 1.5 months (Table 8.3). *Both* immigrant and native-born workers have contributed to this reversal of California's comparative advantage with respect to the education of its labor force. However, immigrants have contributed proportionately more to this decline than natives. Figure 8.1 shows that, in 1960, California immigrants were on the average better educated than immigrants in the rest of the nation by 0.2 years. By 1990, California immigrants' education trailed that of immigrants in the rest of the nation by a full year. In contrast, the relative erosion in natives' education was less than half that, from a one year advantage to a 0.5 year advantage. Most of the relative decline in the education of California natives reflects the lower educational attainment of the native-born children of immigrants (Vernez and Abrahamse, 1996). Hence, the reversal in California's comparative advantage with respect to education can be attributed to the higher number of less-educated immigrants coming into California.

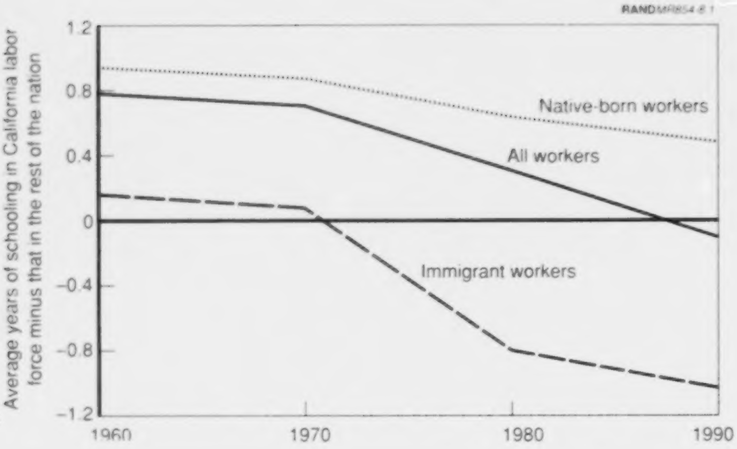

Figure 8.1—California's Labor Force Has Lost Its Educational Advantage

The downward trend in the educational level of California's labor force is also apparent at both ends of the educational distribution. Whereas, in 1960, the proportion of workers with less than 12 years of education was 20 percent lower in California than in the rest of the nation (43 versus 54 percent), by 1990 it was 14 percent higher (16 versus 14 percent). And over the same period, the proportion of workers with a college education dropped from 29 percent more in California than in the rest of the nation, to 11 percent more.

The *relative* "deterioration" between California and the rest of the nation in educational attainment of the labor force does not mean that there has been an absolute deterioration of the levels of education in either location. Quite to the contrary: As shown in Chapter Six, there has been a dramatic increase in the absolute levels of education in both California and the rest of the nation, which boosted the average education by an average of 1.5 years in California, from 1960 to 1990, and an even larger average of 2.5 years in the rest of the nation, during the same time. This has been accompanied by a decrease in the share, as well as the absolute numbers, of workers with less than 12 years of education in both

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places, although the decrease has been relatively less in California than in the rest of the nation.

California's Labor Productivity Remains High

Has the erosion of the educational attainment of California's labor force relative to that of the nation affected productivity of California industries negatively? And does the lower earnings pattern of immigrants in California reflect their lower productivity relative to that of native-born workers at comparable levels of schooling? We found evidence that the higher labor productivity enjoyed by California employers has been eroded over time, although not enough to erase California's comparative advantage altogether. At least not yet. And we found no evidence that immigrant labor is less productive than native-born labor, and much evidence to suggest the contrary.

Figure 8.2 plots the value added and capital investments per employee in California's manufacturing sector as a whole divided by that in the nation as a whole.[6] It shows that the value added per employee in manufacturing was 10 percent higher in California than in the rest of the nation in the 1960s and early 1970s and, though lower in 1994, was still slightly higher. This pattern of higher productivity of California manufacturing has prevailed over the 1960–1994 period in spite of three other notable trends.

First, the share of immigrants in the manufacturing labor force has increased over four times faster in California than in the rest of the nation. In 1960, the share of immigrants in manufacturing was 12 percent, compared with 7 percent in the rest of the nation. By 1990, that share in California had increased to 39 percent, while it remained practically unchanged in the rest of the nation.

Second, the mean years of schooling of the California labor force has declined relative to that in the nation by a full year.

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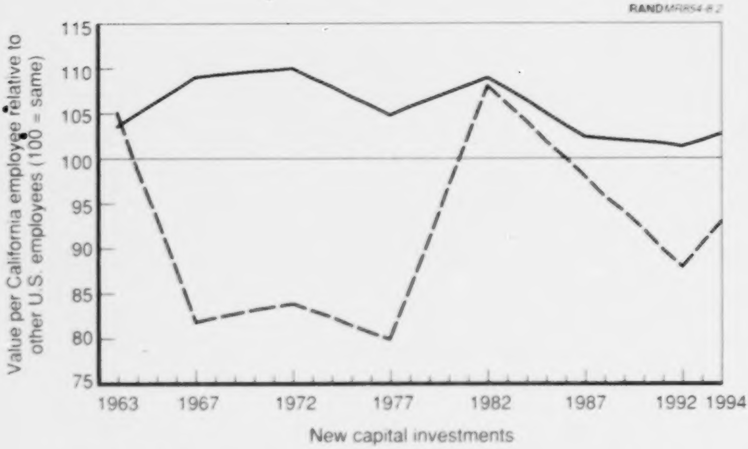
[6] Measures of "labor productivity" are available only for manufacturing industries.



SOURCE: U.S. Department of Commerce, 1963–1992 (*Census Manufactures*), and 1994 (*Annual Survey of Manufacturers*); and Appendix Table B.1 of this report.

Figure 8.2—California's Manufacturing-Worker Productivity Remains Competitive

And third, capital investments in manufacturing have been similar in California and the rest of the nation. If anything, California manufacturers have invested less (about 5 percent less over the 1963 to 1994 period) in new capital than manufacturers in the rest of the nation.

The productivity of California manufacturing industries declined in the mid 1980s—between 1982 and 1987—and has remained seemingly constant since then. This may be due to the combined effects of the long-term *relative* decline in education of the California labor force and the lower investments in new capital made by California manufacturers during those years. Also, in these latter years, California experienced disproportionate cutbacks in its aerospace sector due to defense downsizing and also entered the deepest and longest recession since the depression. Indeed, value added per employee in California's defense industry relative to that in the rest of the nation plummeted, from a ratio of 1.09 in 1982 to a ratio of .88 in

1992, and back to 1.01 in 1994.[7] These fluctuations in the productivity of the aerospace industry, however, did not alter the general trend toward lower productivity of California's manufacturing sector relative to that of the rest of the nation.[8]

To assess whether the above pattern for manufacturing as a whole masks major variations across specific manufacturing industries making different products and requiring a different mix of skills, we examined the trends in productivity, investments, and dependence on immigrant labor in selected industries, ranging from food and kindred products to apparel and computer and electronic equipment, as shown in Table 8.4. The 1990 average education of the labor force of these industries varies from a low 9.4 years (apparel) to a high 14.2 years (computer and office equipment).

For each selected industry, Table 8.4 displays the 1960 to 1990 average ratio of the value added and new capital investments per employee in California relative to those in the rest of the nation.[9] It also displays the changes in the dependency on immigrant labor of the selected industry and the changes in average years of schooling in a California industry relative to that in the nation.

The industry-specific pattern displayed in Table 8.4 is consistent with the pattern described above for the overall manufacturing industry. Productivity in *each of the California manufacturing indus-*

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[7] We defined the aerospace industry as including communications equipment (Standard Industrial Classification—SIC 366), aircraft parts (SIC 372), guided missiles and space vehicles (SIC 376), and navigation and measuring and controlling devices (SICs 381 and 382). Excluding aircraft parts, the ratio of California's value added per employee to that of the rest of the nation was 1.03 instead of 1.025 for all manufacturing and 1.05 instead of 1.015 in 1992.

[8] Net of the aerospace sector, the ratio of manufacturing value added per employee between California and the nation declined from 1.06 in 1982 to .99 in 1987, 1.02 in 1992, and 1.00 in 1994.

[9] There have been fluctuations in the ratio of California value added and new capital investment per employee relative to that of the rest of the nation over time in each specific industry. By and large, however, these fluctuations have been minimal and have not changed the relative relationship of California and the rest of the nation. Hence, the average over the period indicates the pattern that has prevailed over the entire period of time examined in the study. Exceptions are noted in the text.

Table 8.4

Productivity and New Capital Investments in California Relative to Those in the Rest of the Nation, 1960–1990

Industry	SIC Code	Value Added Per Employee:[a] California + Nation[a]	New Capital Investment Per Employee: California + Nation[a]	Change in Share of Immigrants Relative to the Rest of the Nation[b]	Decline in Average Years of Schooling in California Relative to the Rest of the Nation (years)[c]	1990 Mean Education in California
Food and kindred products	20	1.12	1.02	2.1	-1.0	11.0
Apparel	23	1.10	.97	2.2	-2.5	9.4
Chemical and allied products	28	.85	.64	2.3	-1.0	12.6
Metal products	33 & 34	.95	.79	5.3	-2.2	11.2
Computer and office equipment	357	.92-1.43	1.17	1.4	-0.5	14.2
Industrial machinery	35-(357)	.98	.91	3.8	-1.0	11.9
Electronic and other electric equipment	36	1.05	1.15	3.5	-0.8	13.0
Instruments and related products	38	.90	.95	3.0	-0.5	13.3
Manufacturing		1.06	.93	3.3	-1.0	12.2

SOURCE: U.S. Department of Commerce, 1963, 1967, 1972, 1977, 1982, 1987, and 1992 (Census of Manufacturers); and 1960, 1970, 1980 and 1990.

[a] These indices are the ratio of average value added (capital invested) per employee in California to the average value added (capital invested) per employee in the nation over the 1960–1994 time period in each specific industry.

[b] This index is the 1990 ratio of share of immigrants in California and share of immigrants in the rest of the nation divided by the 1960 ratio of immigrants in California and share of immigrants in the rest of the nation in each specific industry. The higher the ratio, the higher has been the growth in the share of immigrants in California relative to that in the rest of the nation.

[c] Difference between 1960–1990 change in mean education of California's labor force and 1960–1990 change in mean education of the rest of the nation's labor force in each specific industry.

tries considered has remained relatively constant in spite of generally lower new capital investments, much larger increases in share of immigrants, and significant declines in average years of schooling in the California labor force relative to those in the rest of the nation. This pattern is particularly notable in the apparel industry where the immigrant share has increased from 32 percent in 1960 to 75 percent in 1990, compared with an increase from 12 to 13 percent in the rest of the nation. At the same time, mean years of education of California's apparel labor force remained constant at 9.4 years, while that in the nation increased from 8.8 to 11.8 years, a negative differential increase of 2.5 years. In spite of this pattern and investments in new capital lower than those made in the rest of the nation, value added per employee in California's apparel industry has remained consistently 5 to 10 percent higher from 1960 to 1994.

There are two notable exceptions in this pattern among the industries listed in Table 8.4. Both of these industries, computer and office equipment and electronic and other electric equipment, have become increasingly high technology. In the process, both have seen the mean education of their labor force increase from 11.3 and 10.9 years of schooling in 1960 to 14.2 and 13.0 years in 1990, respectively. Capital investments in these high-technology industries have been consistently higher (by an average 15 percent) in California than in rest of the nation. As a result, the value added per employee in California's computer industry relative to that in the nation has also steadily increased, from a low 92 percent in 1972 to a high 143 percent in 1994, with most of that increase occurring between 1987 and 1994. In these industries, the decline in educational levels relative to those in the nation were more than compensated for by higher investments in technology.

In industries such as chemical and allied products or metal products in which productivity has remained constant, but at a lower level in California than in the rest of the nation, capital investments have also been much lower in California than in the rest of the nation.

The qualitative literature on immigration indicates that immigrants do not create major problems in the workplace, and it is rich in references describing immigrants as "hard working," "motivated," and possessing "a strong work ethic." Because of these traits, employers report preferring hiring immigrants to other workers (e.g., Moss and Tilly, 1991; Aponte, 1996; Kirschenman and Neckerman, 1991; and Waldinger and Bozorgmehr, 1996).

These views are generally confirmed in case studies conducted by RAND in 1995 of 25 Southern California medium and small firms—machine shops, aircraft parts makers, and electronic and material firms—providing high-technology electronic components as well as high-precision parts to the aerospace defense and commercial industries (Vernez and Dardia et al., 1996). Two-thirds of these firms were highly dependent on immigrant labor, ranging from a low 20 percent to a high 80 percent. The median share of immigrants in those firms was 60 percent. In most firms, the origin of immigrant labor was Mexico and Central America. But electronic firms typically reported a labor force of both Hispanic and Asian origin.

We asked the managers of those firms, "Does the management of a mixed native- and foreign-born labor force present any special problems?" Because the question was open-ended, managers had an opportunity to elaborate on any problems related to work ethics, productivity, communications, and relations among workers. By and large, respondents indicated there were no problems with immigrant labor and with managing a mixed-origin labor force.

Typical comments from respondents included the following:

> No problem, it's a good deal.
>
> I like immigrants, they are interested in working. I like best new immigrants better than second generation immigrants. They (the latter) think it is owed to them.
>
> . . . zero problems.

A handful of respondents, however, indicated that language and hence communications were sometimes a problem. Firms used various approaches to address this problem. Four of the 25 firms we interviewed provided "English as a Second Language" courses on-site or reimbursed workers' tuition for learning English off-site. Another firm used translators during plant meetings "for anyone who may have trouble understanding management English." Still at other firms, respondents indicated that the availability of numerous bilingual managers prevented major problems from developing in the first place.

In conclusion, the pattern of stability in productivity and the positive views held by employers toward immigrants, even in the midst of a dramatic shift in immigration dependency of California industries, lend support to the view that immigration has not negatively affected the productivity of California industries. This pattern is all the more remarkable in the midst of a steady *relative* (although not absolute) decline in educational levels of California's labor force, which over 30 years of steady immigration is equivalent to an average one full year of decline. In some industries, such as the apparel industry, the relative educational "deterioration" has exceeded an average of two years. We did observe, however, a downward trend in productivity starting in the mid-1980s.

This pattern also suggests that the skills needed by many industries can be learned on the job with minimal formal education without significantly affecting productivity even in today's economy. Formal education for a large segment of the economy may be less critical than attitudes, work habits, and motivational qualities that, according to employers, immigrants possess to a greater extent than native-born workers.

EFFECTS ON ECONOMIC STRUCTURE AND GROWTH

We now come to the bottom-line question: Have immigrants contributed to the disproportionate growth of California's economy in all sectors of its economy during the 1960–1990 time period? The information reviewed so far indicates that immigrant labor in California has consistently cost less than native-born labor. And although immigration has contributed to the loss of California's comparative advantage in the education of its labor force, the decline in the productivity of California firms relative to those in the nation has not been enough to reverse California's comparative advantage in this regard throughout the period considered. In brief, the disproportionate growth of immigration to California has provided its employers with a comparative advantage relative to their counterparts in the rest of the nation and may well have contributed to the disproportionate growth of the state's economy.

To address this bottom-line question, we examined the following two subquestions:

- Has the relative employment growth of California been greater for industries with higher increases in share of immigrant labor than in industries with lower increases in share of immigrant labor?
- Have immigrants provided some, if not all, specific California industries with a clear comparative advantage relative to their counterparts in the rest of the nation?

The yes answers to both questions, as documented below, are consistent with the conclusion that immigration contributed in some measure to the disproportionate growth of California's economy during the 1960–1990 time period. The corollary is that immigrants did not contribute to the disproportionate recession of the California economy in the early 1990s. Arguably, that recession might have been more severe without immigration.

The Size of the Industry Shift Toward California Is Related to the Increase in Immigrant Share

To determine whether the steady industrial shift toward California was associated with the increasing hiring of immigrants by California employers relative to those in the rest of the nation, we estimated the following equation:

$$(Ric - Rin)t,\ t+1 = f(Iic - Iin)\ t,\ t+1$$

where, Ric = rate of growth of industry i in California

Rin = rate of growth of industry i in the rest of the nation

Iic = rate of growth in share of immigrants in industry i in California

Iin = Rate of growth in share of immigrants in industry i in the rest of the nation

$t, t+1$ = one decade.

$(Ric - Rin)$ measures the industrial shift toward California that took place during a specified decade. A positive industrial shift indicates employment in industry i grew at a faster rate in California than in the rest of the nation, while a negative difference indicates industry i grew more slowly in California. Similarly, $(Iic - Iin)$ measures the shift in the share of immigrants in a specific industry. A positive difference indicates that the share of immigrants in industry i in California grew faster than the share of immigrants in the same industry in the rest of the nation; the reverse is true if the difference is negative. Finally, the equation indicates that an overall industrial shift toward (or away from California) is associated in some way with a relative increase or decrease in the relative share of immigrant labor in California industry.

To estimate the above model, we divided California's and the rest of the nation's economy into 70 industries.[10] And we estimated the above relationship for each of the following three decades: 1960–1970, 1970–1980, and 1980–1990. The average immigrant shift across these industries varies in each period from 38 percentage points in the first decade to 80 percentage points in the second and 52 percentage points in the third.

Our results, summarized in Table 8.5 and further illustrated in Figure 8.3 for the period 1980–1990, indicate a statistically significant and positive association between the growth of an industry in California relative to its counterpart in the rest of the nation, and its growing dependence on immigrant labor; i.e., the higher the rate of growth in the share of immigrants in the labor force of a California industry relative to that in the rest of the nation, the faster the growth of that industry in California relative to that in the rest of the nation. The similarity in the value of the estimated coefficients in each of the three decades indicates stability in that relationship over time. Its value of about .20 indicates that a positive shift in share of immigrants of 5 percentage points in an industry is associated with an employment growth of 1 percentage point higher in California than in the rest of the nation. This relationship implies that during the 1980–1990 decade, immigration accounted for about 2 percentage

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[10] The 70 industries are aggregates of three SIC digit industries. Two criteria were used in forming the groupings: similarity of products or services and similarity of share of immigrants in labor force.

Table 8.5

Relationship Between Change in Share of Immigrants and Industries' Employment Growth in California Relative to that in the Rest of the Nation, 1960–1990

Indicator	1960–1970	1970–1980	1980–1990
Coefficient	.18	.23	.22
	(3.78)	(5.92)	(6.4)
R^2	.19	.35	.37
	(14.3)	(35.1)	(40.7)

SOURCE: Computation by the author based on U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

NOTE: Values in parenthesis are + statistics.

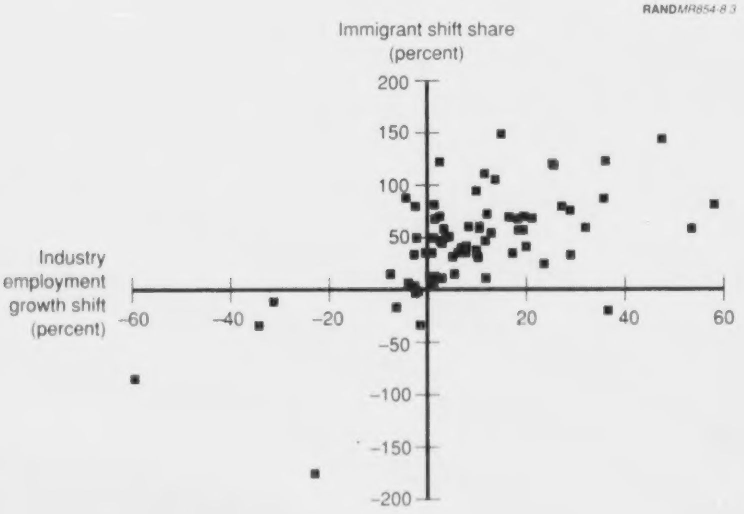

Figure 8.3—Relationship Between Industrial and Immigrant Shift from the Rest of the Nation to California, 1960–1990

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points of the 16 percentage points at which employment grew faster in California than in the rest of the nation, a small but not insignificant contribution.

This positive association between an industry's growth in California and growth in share of its immigrant labor force relative to that in the rest of the nation does not establish causality. The best we can claim is that it is consistent with the view that growth of immigration may have contributed to California's economic growth, and most certainly has not impeded it.

Focus on Selected Industries

Is there evidence that specific industries benefited disproportionately from immigration? For instance, it has been suggested that immigrants have disproportionately benefited agriculture, most particularly perishable crops agriculture; textile and apparel; and the private household industries. More recently, it has been argued that the import of skilled immigrants has helped the California's electronics and software industry to thrive in California at the expense of the rest of the nation and the rest of the world. We examined the role immigrants have played in the development of industries that have a majority of immigrants in their labor force or are particularly important to California's economic base:

- High-immigrant-dependent industries: agriculture, textile and apparel, and household services
- High-technology industries: computer and office equipment, electronic, and other electrical equipment.
- Export industries: instruments and related products.
- Other: construction.

For each of these industries, we compared trends in the composition of the labor force, labor costs, investments, and productivity (where available) between California and those in the rest of the nation. Below we provide four illustrations of our industry-by-industry analyses and state our overall conclusions.

The Textile and Apparel Industry. There have been no more diverging trends in any industry between California and the rest of the nation than in the textile and apparel industry. In California, employment in this industry grew 250 percent from 73,000 in 1960 to 186,000 in 1990, while it declined 20 percent in the rest of the nation.[11] In 1960, California's share of that industry was a mere 3 percent; today, it exceeds 10 percent.

The textile and apparel industry has remained predominately a low-skill industry in both California and the rest of the nation: One out of every two workers in that industry had fewer than 12 years of schooling as of 1990 (Table 8.6).

In California's textile and apparel industry, immigrant workers not only filled all new jobs created since 1960, they also began to replace native-born workers in the 1980s. As a result, the share of immigrants increased from one out of every three workers to three out of every four workers. This trend is in sharp contrast to the trend in the rest of the nation, where the decline in jobs was absorbed in equal proportions by both immigrant and native-born labor. As a result, the share of immigrants has remained constant in the rest of the nation throughout the 30 year period at about 13 percent, a share that is now 6 times lower than in California.

Did California's shift to immigrant labor provide this industry with a comparative advantage, hence leading to its relatively rapid growth? Table 8.6 shows that immigrants provided a significant cost advantage to California employers. Their earnings have consistently been lower than earnings of native-born workers in California and in the rest of the nation and have grown ever more so. By 1990, immigrant workers with fewer than 12 years of schooling (half of the labor force in California textile and apparel) commanded earnings that were 32 percent lower than those of California native-born workers with the same level of education and 13 percent lower than similarly educated native-born workers in the rest of the nation.

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[11] Note that throughout the remainder of this chapter the Census estimates of size of the labor force in specific industries may differ somewhat from those provided by the U.S. Bureau of Labor Statistics or the California Economic and Development Department (EDD). This is because these estimates originate from different sources, i.e., employee reports for the Census and employer reports for BLS and EDD.

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The increased reliance of California employers on immigrants led to a deterioration in the level of schooling of the labor in this industry *relative* to that in the rest of the nation by more than two full years on the average (Table 8.6). And workers in California are now 50 percent more likely to have less than 12 years of education than they are in the rest of the nation. But this sharp relative deterioration in educational level in the California textile and apparel industry has not led to a decline in productivity in that industry. Value added per employee was 12 percent higher in California than in the rest of the nation in 1963 and remained 7 percent higher in 1992. Neither did California employers have to compensate for lower levels of education in their labor force with higher capital investments during most of the 1960–1990 time period.

Agriculture. Agriculture is another industry whose more rapid growth in California coincided with a rapid growth in the share of immigrants in its labor force. In the 1960s, when immigration was at a low level, employment in that industry declined rapidly, although the decline was greater in the rest of the nation than in California. As immigration increased in the 1970s and 1980s, so did employment, which nearly doubled in California, from 253,000 in 1970 to 492,000 in 1990. In the rest of the nation, employment has remained unchanged. During that period, California's share of agricultural employment tripled from 6.9 to 17.2 percent, and the share of immigrants had reached the level of more than half of its labor force. In the rest of the nation, immigrants continued to constitute only 8 percent of the agricultural labor force (Table 8.7).

Agriculture has also remained a predominantly low-skill industry; during 1960, in excess of 70 percent of its labor force had 12 or fewer years of schooling in both California and the rest of the nation. In 1990 in California, more than 50 percent of that labor force had less than 12 years of schooling, compared with 30 percent in the rest of the nation.

The reasons for the shift in this industry toward California are many, including the ready availability of land, water, and the mild climate. In addition, though, California agriculture has also benefited from the lower costs of immigrant labor. California immigrants earned consistently less than native-born workers in California and generally in the rest of the nation—at all levels of education. As was noted

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Table 8.6

Selected Characteristics of the Textile and Apparel Industry Labor Force, in California and the Rest of the Nation, 1960–1990

Indicators	1960	1960–1970	1970	1970–1980	1980	1980–1990	1990
Employment growth (%)							
California		16.3		57.7		37.5	
The rest of the nation		0.8		2.2		-20.9	
Immigrant (%)							
California	32.4		41.0		60.9		74.8
The rest of the nation	12.3		10.4		11.6		12.7
California earnings: ratio of immigrants ÷ native-born workers							
Less than 12 years schooling	.86		.87		.81		.68
12 years schooling	.92		.86		.77		.75
Earnings: ratio of California immigrants ÷ native-born workers in the rest of the nation							
Less than 12 years schooling	1.01		1.01		.89		.87
12 years schooling	1.28		1.02		1.00		.98
Mean education (years)							
California	9.5		9.5		9.3		9.4
The rest of the nation	8.8		9.7		10.5		11.2
Less than 12 years schooling (%)							
California	61.2		58.5		56.8		50.9
The rest of the nation	74.1		64.8		50.4		33.2
Value added per employee:[a] California ÷ the rest of the nation	1.12		1.08		1.14		1.07
New capital per employee:[a] California ÷ the rest of the nation	NA		1.02		1.24		.89

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

NOTE: NA means not available.

[a] These indices are averages between the 1967 and 1972 Census for 1970, the 1977 and 1982 for 1980, and 1987 and 1992 for 1990.

Table 8.7

Selected Characteristics of the Agricultural Labor Force, in California and the Rest of the Nation, 1960–1990

Indicators	1960	1960–1970	1970	1970–1980	1980	1980–1990	1990
Employment growth (%)							
California		-11.2		46.9		32.0	
The rest of the nation		-34.6		.8		4.9	
Immigrant (%)							
California	28.5		23.8		37.0		54.1
The rest of the nation	3.7		2.7		3.7		7.9
California earnings: ratio of immigrants ÷ native-born workers							
Less than 12 years schooling	.84		.87		.92		.75
12 years schooling	.71		.75		.74		.72
Earnings: ratio of California immigrants ÷ native-born workers in the rest of the nation							
Less than 12 years schooling	1.28		1.02		1.02		.99
12 years schooling	1.06		.82		.77		.83
Mean education (years)							
California	8.0		9.1		9.6		9.3
The rest of the nation	8.2		9.4		10.9		11.5
Less than 12 years schooling (%)							
California	73.0		62.6		53.2		51.1
The rest of the nation	75.6		63.2		41.7		29.5

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

above for the textile and apparel industry, the gap in immigrant earnings relative to those of natives has increased over time, both within California and in the rest of the nation. The greater reliance of California agriculture on the least-educated, and hence the cheapest, labor has no doubt further contributed to California's comparative advantage for agriculture relative to the nation's.

Computers and Office and Accounting Machines. California's high-technology industries—computers, communications, electrical equipment, and measurement and medical instruments—have been major contributors to the state's growth. They are also the largest and fastest growing export industries in California (Center for Continuing Study of the California Economy, 1995).

The state's employment in this industry increased more than eightfold, from 16,500 in 1960 to 150,000 in 1990,[12] with the bulk of the employment growth occurring in the first half of that period. Although the rate of employment growth declined significantly in the 1980s—it grew only slightly faster than the state's average—the industry's output continued to rise rapidly. Value added per employee (in constant dollars) increased more than threefold between 1982 and 1992. Hence, the slower growth of jobs observed during that decade is due to this growth in productivity. This, in turn, has led to a stabilization of employment in the industry in the rest of the nation (Table 8.8).

The state's employment share of this industry also increased threefold, from 10 percent in 1960 to 33 percent in 1990, as has the share of immigrants in California relative to that in the rest of the nation: The California share increased from 10 to 30 percent between 1970 and 1990, compared with an increase from 7 to 10 percent in the rest of the nation. The industry has also become increasingly high skill. The proportion of California workers in this industry with college degrees increased from 19 percent in 1960 to 45 percent in 1990 at the same time as the share of workers with fewer than 12 years of schooling has declined from 29 to 5 percent. This shift toward higher-skill labor has been even more pronounced in the rest of the

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[12] Estimate from 1990 U.S. Department of Commerce, (Census of Population and Housing).

Table 8.8

Characteristics of the Computers and Office and Accounting Machines Labor Force, in California and the Rest of the Nation, 1960–1990

Indicators	1960	1960–1970	1970	1970–1980	1980	1980–1990	1990
Employment growth (%)							
California		206.1		118.5		37.3	
The rest of the nation		71.2		57.4		4.9	
Immigrant (%)							
California	13.3		10.2		19.4		29.9
The rest of the nation	6.5		5.2		7.0		10.2
California earnings: ratio of immigrants ÷ native-borns							
13–15 years schooling	.73		.89		.90		.79
16 or more years	.77		.94		.83		.90
Earnings: ratio of California immigrants ÷ native-born workers in the rest of the nation							
13–15 years schooling	.72		.92		.96		.91
16 or more years	.88		.91		.85		1.08
Mean education (years)							
California	12.1		13.1		13.5		14.2
The rest of the nation	11.3		12.6		13.3		14.0
16 or more years schooling							
California	19.4		24.7		29.3		45.9
The rest of the nation	9.4		20.4		26.3		40.2
Value added per employee:							
California ÷ the rest of the nation	NA		.92		.92		1.39
New capital per employee:							
California ÷ the rest of the nation	NA		1.15		1.11		1.39

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, 1990, and 1972, 1982 and 1992 (Census of Manufacturing).

NOTE: NA means not available.

nation, where the share of workers with college degrees has increased from 9 to 40 percent and the share of workers with fewer than 12 years of schooling has decreased from 39 to 5 percent.

As in other manufacturing industries, the main advantage immigrant labor has provided to California employers is a cost advantage. Immigrant earnings have been consistently lower than those of their native counterparts with similar levels of education working either in California or in the rest of the nation. The difference has fluctuated over time, generally exceeding 10 percent relative to California native-born workers for both college graduates and those with some college education.

Lower-cost immigrant labor has provided a comparative advantage to this industry, but how much of a comparative advantage is difficult to gauge. The relative increased share of immigrants in this California industry has coincided with consistently higher new capital investments being made in California than in the rest of the nation, as is shown at the bottom of Table 8.8. At the same time, value added per employee, which was lower in California than in the rest of the nation in the 1970s and early 1980s, was surpassing that of the rest of the nation by 39 percent in 1992. In this industry, as in other high-tech industries, a combined increased dependence on immigrant labor and higher capital investments has led the California industry to outpace the productivity of similar industries in the rest of the nation

Construction. The saying that immigrants have become the "motor" of the construction industry in California may be a bit exaggerated. Certainly, the share of immigrants in the industry has increased over time, from 9 percent in 1960 to 24 percent in 1990, but this share remains below the share of immigrants in the state economy as a whole, and the shift to increased dependence on immigrants has been no greater in construction than in the economy as a whole (Table 8.9).

Given that construction remains a predominantly low-skill industry—most of the California labor force has 12 or fewer years of schooling—this pattern of immigrant growth is somewhat unexpected and may be due to the continuing strength of the trade unions in this industry. As can be seen in Table 8.9, immigrant earn-

Table 8.9

Characteristics of the Construction (SIC 36) Labor Force, in California and the Rest of the Nation, 1960–1990

Indicators	1960	1960–1970	1970	1970–1980	1980	1980–1990	1990
Employment growth (%)							
California		11.2		49.8		55.1	
The rest of the nation		16.6		29.7		18.4	
Immigrant (%)							
California	8.7		8.5		12.4		24.2
The rest of the nation	5.8		4.5		4.7		7.1
California earnings: ratio of immigrants ÷ native-born workers							
Under 12 years of schooling	1.01		.88		.87		.76
12 years of schooling	.99		.99		1.02		.74
Earnings: ratio of California immigrants ÷ native-born workers in the rest of the nation							
Under 12 years of schooling	1.34		1.13		1.09		.93
12 years of schooling	1.22		1.12		1.16		.92
Mean education (years)							
California	10.2		11.0		12.0		11.9
The rest of the nation	9.3		10.1		11.3		11.9
High school or less schooling (%)							
California	83.8		77.4		65.7		57.0
The rest of the nation	90.8		88.2		78.4		65.8

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

ings have been lower than native-born workers' for those with fewer than 12 years of schooling but have been similar for workers who have completed high school or have some college education. This pattern held through the 1960s and 1970s. In the 1980s, however, immigrants saw their earnings dip significantly relative to native-born workers, signifying a possible weakening in the hold of the trade unions in California and again possibly signaling a faster shift toward immigrant labor in this industry in years to come. Indeed, use of immigrant labor in the construction industry increased significantly in the 1980s, during which the share of immigrants in the construction labor force doubled, from 12 to 24 percent, one of the most rapid shifts in any California industry.

Overall Findings. There are large variations in the penetration of immigrant labor in the various California industries. But if there is one near-constant across nearly all industries, manufacturing and services, exports and high tech, and high- and low-skill industries, it is that immigrant labor has generally cost California employers less than native-born labor (see also Chapter Six). Within each industry, this relationship has held at all levels of education, from high school dropouts to college graduates, and, hence, has benefited California employers relative to those in the rest of the nation. The extent of the relative advantage gained by greater reliance on immigrant labor in California than in the rest of the nation appears to be mediated by the relative strengths of organized labor, most particularly among unskilled workers. Hence, we found that earnings differentials between immigrant and native-born workers in the construction industry, with its relatively stronger trade unions, are smaller than in the agriculture and apparel industries, where labor is not as strongly organized or where the use of intermediate contractors is more common.

The relative labor cost advantage of California has also been driven by a relative, although not absolute, lowering of the educational attainment of its labor force in all industries relative to the rest of the nation. Hence, the educational composition of California industries that were skewed toward higher-educated labor relative to that in the nation has converged more to look like the educational composition of the labor force of similar industries in the rest of the nation.

CONCLUSIONS

We found evidence supporting the view that immigrants have contributed in some measure to the disproportionate employment growth of the California economy relative to that of the rest of the nation during the 1960 to 1990 time period. A corollary is that immigrants did not cause or contribute to the relatively longer and deeper 1990–1995 recession experienced by California relative to the rest of the nation. Indeed, immigration has continued unabated over that period of time, and, by 1996, California employment growth once again was exceeding that of the nation.

There is a positive association between the growth of an industry in California relative to the rest of the nation and the growth of its share of immigrant labor. As noted in Chapter Six, immigrants have provided California employers with a clear labor cost advantage over their counterparts in the rest of the country; this relative labor cost advantage has further been enhanced by a *relative* lowering of the educational level of the labor force in nearly all industries simply because workers with lower levels of education receive lower wages.

At the same time, this *relative* "deterioration" of the educational attainment of the California labor force in the state as a whole or within specific industries has not led to a reversal of California's comparative advantage with respect to the productivity of its workers. By and large, where industries were more productive in California than in the rest of the nation in the 1960s, they have remained so without the need to make higher new capital investments than did industries in the rest of the nation.

The above pattern suggests that skills needed by many industries can be learned on the job, with minimal formal education, without necessarily affecting productivity, even in today's economy. It also suggests that formal education for a large segment of the economy may be less critical than positive attitudes, work habits, and motivations—traits that according to employers, immigrants possess to a greater extent than native-born workers. This lends support to the view that there is an increasing mismatch between what employers want and need from their labor force and what the nation's high schools provide, as was discussed in Chapter Six.

Large numbers, low relative levels of education of California immigrants, and low relative earnings, regardless of level of education, have combined to give rise to two less-favorable long-term trends. First, as already noted, there has been a slow but steady erosion of California's advantage in the level of education of its labor force relative to that in the rest of the nation. Whereas the state used to have a one year average advantage in education, it now has a two month deficit. And although productivity in manufacturing continues to be higher in California than that in the rest of the nation, this relative advantage has been reduced since the mid-1980s. Although factors other than education of the labor force may also have contributed to this decline in productivity in California relative to that in the rest of the nation, these trends bear watching closely.

Second, immigration has contributed to a more rapid increase in the earnings disparity within California than in the rest of the nation. In 1960, California enjoyed a lower disparity among its workers than those in the rest of the nation. By 1980, this relationship had been reversed, and the disparity within California relative to that in the rest of the nation continued to increase during the 1980s.

The comparative advantage immigration has provided California's employers and hence its overall economy may not have been without costs to native-born labor. As noted in Chapter Six, decline in net migration of native-born workers from other states to California has coincided with an increase in immigration, suggesting a reduction of job opportunities for native-born workers in California. We also found evidence that the growth in earnings of native-born workers with 12 years of education or fewer—high school dropouts and high school graduates—has been slower in California than in the rest of the nation, suggesting that immigration may also have slowed down the growth of wages in California. We turn to this question in the next chapter.

Chapter Nine

EFFECTS ON NATIVE-BORN WORKERS

The previous chapters considered the effects of immigration by looking at the overall economy from the perspective of employers. In this chapter, we consider the effects immigrants have had on the job opportunities and earnings of native-born workers, that is from the perspective of various groups of workers who compete with one another within the California and national labor markets. These perspectives differ significantly. From an employer's perspective, labor, whether foreign- or native-born, is an input to the "production" process and is valued in terms of the relative contribution made to that employer's enterprise. From the perspective of a native-born worker, an immigrant may be applying for the same job and hence may be seen as a competitor.

Reviewing the research literature on the magnitude of the effect of immigration on job opportunities and/or wages of native-born workers, Friedberg and Hunt (1995) conclude that empirical estimates in a variety of settings and using a variety of approaches show that the effect of immigration on labor market outcomes for natives is small: "Most empirical studies of the United States and other countries find that a 10 percent increase in the fraction of immigrants in the population reduces native-born workers' wages by at most 1 percent."[1] The effect on low-skill workers has been found to be somewhat higher. However, Borjas, Freeman, and Katz (1996) argue that most studies understate the adverse effect of immigration-induced increases in labor supply on natives' wages.

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[1] A 10 percent increase in the fraction of immigrants is equivalent to an increase in the share of immigrants in the labor force from, say, 10 to 11 percent. Since the increase in share of immigrants in the nation as a whole has typically not exceeded one to two percentage points or 15 to 25 percent in any one decade, the measured effect on wages would be in the range of 1.5 to 2.5 percent, hence viewed by most observers as small.

In spite of these findings, concerns about the effects of immigration on native-born workers in California have been heightened over time by two countervailing trends, which have already been amply described in the previous chapters: A disproportional and continuous increase to California in the volume of immigrants with relatively low levels of education on the one hand, and an economy that is increasingly employing college-educated workers on the other. Hence, we would expect that, if immigration to California has had any effect, it would have affected disproportionately the job opportunities, or wages, or both, of less-educated workers.

The chapter begins with a discussion of the issues involved in measuring the effects of immigration on native-born workers. Our analytical approach and its limitations are discussed next. The following section then examines the question of effects of immigration on job opportunities of native-born workers from both the perspective of those who resided in the rest of the nation and may have been discouraged (or encouraged) to move to California to take a new job and from the perspective of California residents who may have dropped in or out of the labor force. We examine the question of effects of immigration on native-born workers' earnings last.

COMPLEXITIES OF MEASURING EFFECTS ON NATIVE-BORN WORKERS

Reliably measuring the effects of immigration on native-born workers has confounded analysts for some time because we can observe only the net effects—at various points in time—of countervailing and constantly changing economic and labor market forces that interact with one another over time. In addition, the net effects on labor

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However, the share of immigrants in California increased from 10 to 26 percent, or a 160 percent increase, between 1970 and 1990. Hence, according to the research consensus we would expect immigrants to have decreased earnings of native-born workers in California by 16 percent between 1970 and 1990. As we discuss in this chapter, this estimate, drawn from a review of the literature, provides a context for assessing our estimates for California.

force participation and wages of natives depend on a large number of factors—not all of which are readily observable—including the following:

- The size of the increase in foreign- and native-born adult populations, in both California and the rest of the nation. The latter is relevant to California because workers can migrate from the rest of the nation to California and vice versa.
- The size of the increase in domestic and foreign demand for California-made products and services, including the demand spurred by immigrants.
- The production responses—e.g., expansion and technological change in production—of employers to changes in demand for their products, which in turn determines employers' demand for workers of various skills.
- The response of native-born and immigrant workers to changes in wages, which in turn determine whether they will stay or drop out of the labor force.
- The sensitivity of employers to changes in prevailing wages (e.g., they can substitute capital for labor or vice versa, or cut production).

These last two factors are critical in determining what immigration may affect most: labor force participation or wages. The larger the sensitivity of workers to changes in wages, the larger the effects of immigration are likely to be on labor force participation. However, if workers will continue in the work force in roughly the same amount despite large variations in wages, the effects are likely to be felt more strongly on wages than on labor force participation.

Changes in the above factors, such as volume of immigration or production responses of employers, are not constant over time. Hence, the effects are likely to vary over time, depending on relative changes among these factors as might occur during restructuring of some industries or over the business cycle. That is to say, the net effects of immigration on native-born workers at a given time are likely to be situational and can also vary at different locations in the country.

Effects on native-born workers may also vary depending on the characteristics of immigrants. As noted earlier, California immigrants are generally characterized by low levels of education relative to natives. Hence, we should expect that native-born workers who share similar characteristics with the immigrants are likely to be more affected than those who do not.

In addition, the fact that workers, both native born and immigrant, can move anywhere in the United States adds to the complexity of estimating the effects of immigration on native-born workers in California. If job opportunities for native declined in California because of high levels of immigration, we would expect that some native in California would leave and/or some in the rest of the country would decide not to move into California. Hence, we would expect that changes in job opportunities would not only be reflected in reduced employment rates but also in changes in movement of workers in and out of California.

Over time, this continuing process of adjustment within a national labor market should also lead to a leveling out of employment rates and earnings between California and the rest of the nation, such that simple comparison of employment rates and earnings patterns between the two areas will underestimate the total effects of immigration on native-born workers in California.

APPROACH AND LIMITATIONS

We used various techniques to seek to account for the issues raised above. To assess changes in migration flows in and out of California, we used Census information on interstate movements of workers within the five years preceding the year of the Census.

To estimate the effect of immigration on job opportunities and earnings of California natives, we sought to control for changes in factors other than immigration by looking at differences across areas of the country that vary in immigrant density but were likely to be similarly affected by other factors, including changes in relative numbers of natives of working age, advancements in technology, aggregate demands for products, and sensitivity of native-born and immigrant workers to changes in wages. We sought to do so in two different ways.

First, 1960–1990 trends in labor force participation, unemployment, employment, and earnings were compared between California and those in the rest of the nation. If immigration to California had any effect on California native-born workers, we would expect trends in their employment rates and earnings to be less favorable than those in the rest of the nation. Although other factors may also play a role, the magnitude of the differential in levels of immigration between California and the rest of the nation is so large—16 times larger—that it may dominate other factors. Also, the share of less-educated immigrants is significantly larger in California than in the rest of the nation.

Second, changes in employment and earnings trends across 124 Standard Metropolitan Statistical Areas (SMSAs) were related to changes in the share of the working-age population who are immigrants.[2] In this approach, we sought to control more directly for changes in other factors, including gender, age, race/ethnicity, and education of the labor force; size of the area; and cost of living. We controlled for cost of living because immigrants tend to be concentrated in large cities where the cost of living tends to be higher than in smaller areas and, thus, wages are correspondingly higher. Finally, we sought to control for the now well-known fact that immigrants are likely to move to areas where other similar immigrants have historically migrated and now live because of a strong information network. That is to say, we account for the possibility that immigrants' decisions to move to Los Angeles during the 1980s, for instance, were dependent on the growth in the share of immigrants in Los Angeles during the preceding decade.[3]

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[2] All our estimates are based on incremental changes in employment and earnings over one decade rather than on absolute values at one point in time. Use of changes over time implicitly controls for all factors that are specific to a given labor market and do not change over time. Our estimates will be unbiased if all other factors that affect the change in employment or earnings of native-born workers are not correlated with the increase in share of immigrants across labor markets.

[3] Our approach has sought to address many of the weaknesses in previous studies that estimate the effects of immigrants on native-born workers. Unlike those other studies, we focus on employment and on earnings because at least one other study (Welch, 1979) suggests that an important part of the effect of increases in supply of labor is on employment. Also, we examine a greater number of skill and racial/ethnic groups than any other previous studies. Finally, unlike other past studies, we also control for variations in cost of living across labor markets. For more details, see Appendix B and Schoeni, McCarthy, and Vernez (1997).

In interpreting our results, the reader should keep in mind two potential limitations. First, we cannot be certain that we accounted for all factors that may have differentially affected the various areas. In particular, significant changes in industrial mix across areas would affect demand for labor and would bias results in an unknown direction. However, for the estimates of the effect of immigrants to be biased, the change in immigrant share across areas must be correlated with the change in industrial shifts (that are not due to immigration) across areas. Moreover, as noted in Chapter Six, changes in industrial mix are relatively continuous and slow over time and should not significantly bias our results. Second, and to the extent that leveling off of the effects on native-born workers throughout the national labor market takes place over time as noted earlier, our estimates will represent lower boundaries of the short-term effects of immigration on California natives. The size of the underestimate will depend on how fast the adjustments take place. But, judging by the speed with which net positive migration flows turned into negatives outflows within months after the beginning of the 1990 recession in California (see below), these labor market adjustments can come relatively quickly.[4]

EFFECTS ON JOB OPPORTUNITIES

If immigrants to California affected the job opportunities of the state's native-born workers during the 1970s and 1980s, we would expect that (1) fewer native-born workers from other states would have moved into California or more workers would have left the state or both; (2) fewer native-born workers would have entered the labor force; and/or (3) more would have become unemployed. Because of the larger share of less-educated immigrants, we would expect these effects to be primarily larger among less-educated than among college-educated natives. We first examine changes in the likelihood of native-born workers to come to or to stay in California.

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[4] Note that the United States may be unique in the rapidity within which large regional changes may be absorbed across the national labor market. The flexible U.S. housing and labor market allows those adjustments to take place through internal migration of people more rapidly than in other countries with more rigid housing and labor markets. In European countries, for instance, the housing market is heavily subsidized and tight, and the labor market is more sensitive to credentialism than our own, so workers' mobility is lower compared to that in the United States. This may, in part, explain why Europeans have reacted more strongly to recent increases in flows of immigrants than Americans, even though the relative volume has been lower.

Effects on Internal Migration to and from California[5]

As shown in Chapter Six, the large increase in immigration from abroad during the 1970s and the 1980s coincided with a sharp 60 percent decline in the share of native-born migrants from other states in the country joining the California labor force in the first decade, and a somewhat lesser, 30 percent, decline in that share in the 1980s (Figure 6.3). The differential decline in share of native-born migrants during the 1980s relative to the 1970s may be due to the fact that California's relative growth was 50 percent larger in the 1980s than in the 1970s. At any rate, this decline in net migration to California is consistent with a decline in job opportunities for native labor within the California labor market. During the 1990–1995 recession, California experienced net out-migration to other states.

In this section, we examine trends in net migration to California of adults in the labor force age 16 to 64 in greater detail, as well as changes in the socio-economic characteristics of internal migrants, focusing on education and race/ethnicity. Our findings are generally consistent with some substitution of would-be native migrants to California from other states by international immigrants, most particularly within the less-educated segment of the labor market.

Aggregate Net Migration Flows. Table 9.1 displays the net migration rates into or out of California of both native- and foreign-born workers during the five years preceding each of the 1970, 1980, and 1990 Censuses, and during the 1990–1994 period. The net migration rate is a measure of the net number of persons moving into or out of California per thousand of such persons in California. For instance, between 1965 and 1970, 4.4 native-born workers were added to California's labor force annually for every 1,000 native-born workers residing in California in 1965.

As international immigrants filled a growing share of the new jobs created in California, there was a decline in the net migration rate

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[5] Internal migration refers to migration flows across states within the United States.

Table 9.1

Net Annual Flows and Migration Rates to California from Other States, by Immigration Status, 1960–1990

Immigration Status	1965–1970		1975–1980		1985–1990		1990–1994	
	Number	Migration Rate	Number	Migration Rate	Number	Migration Rate	Number	Migration Rate
Native born	27,700	4.4	16,400	2.0	35,900	3.5	NA	NA
Immigrant	4,850	6.6	6,950	5.1	7,400	2.6	NA	NA
All	32,550	4.6	23,350	2.4	42,300	3.3	–89,400	–6.0
Employment growth ratio: California ÷ the rest of the nation	1.9		1.4		1.9		–0.15	
Share of immigrants in California employment growth (%)	10.4		31.5		53.7		(b)	

SOURCES: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980 and 1990, and Johnson and Lovelady (1995) for the 1990–1994 estimates.

NOTES: Includes civilian persons age 16 to 64 in the labor force. Migration rate is the ratio of net annual flow divided by the corresponding California population in the labor force at the mid-decade, i.e., 1965, 1975, and 1985, respectively, and in 1990 for the 1990–1994 time period. NA means not available.

[a] The 1990–1994 estimates are based on the Census Current Population Survey, which has a larger margin of error than the decennial Census of Population. Johnson and Lovelady (1995) estimate that net out-migration of California residents in the labor force (both foreign and native born) ranged from 20,000 to 160,500 annually during the 1990–1994 period, with a midpoint estimate of 89,000 used to compute the rate shown in this table. These estimates are consistent with estimates derived from the Internal Revenue Service and California Department of Motor Vehicle sources (see Gabriel, Mattey, and Wascher, 1995).

[b] Aggregate employment actually declined at the same time as the share of immigrants in the labor force increased.

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to the state of both native- and foreign-born workers. For instance, the net number of native-born workers joining California's labor force was cut in half, from 4.4 workers per thousand workers in the state labor force in the 1960s to 2.0 per thousand in the late 1970s; but this ratio climbed back up to 3.5 workers per thousand in the 1980s. In contrast, the number of foreign-born workers joining California's labor force from other states[6] declined steadily from 6.6 to 5.1 and 2.6 per thousand workers in the late 1960s, 1970s, and 1980s, respectively. Still, net migration to California from other states remained consistently positive throughout the 1960–1990 time period.

During the 1990–1994 California recession, net in-migration flows turned rapidly into net out-migration flows. Underlying the severity of the California recession relative to that of the nation and the continuing high level of immigration during this period, the rate of net out-migration exceeded the rate of in-migration experienced over the 1960–1990 time period.

This general pattern of association between immigration and lower levels of net in-migration (or even increased net out-migration) described above is consistent with previous research concluding that immigration exerts a significant independent effect on net domestic migration (Mueller and Espenshade, 1985; Walker, Ellis, and Barff, 1992; White and Hunter, 1993; White and Imai, 1994; White and Liang, 1994; Frey, 1995 and 1996). These studies have also found that factors other than immigration, including employment growth, unemployment rate, and per-capita income, exercise an influence on domestic internal migration patterns (see Gabriel, Mattey, and Wascher, 1995). The influence of these other more potent factors—particularly employment growth—may explain the U-shaped trend in net in-migration to California over the 1960–1990 period: It mirrors the U-shaped trend in relative employment growth between California and the rest of the nation. The employment growth rate in the 1980s in California exceeded that of the rest of the nation by almost 2 to 1 but dropped to a 1.5 to 1 ratio during the 1970s.[7] Indeed this sensitivity to overall employment growth over a given period of time is illustrated by the net migration out of California that occurred for the first time during the 1990–1994 recession, when employment losses in the state were larger than in the rest of the nation and lasted over a longer period of time. Hence, the 50 percent decline in the net in-migration rate of native-born workers from the late 1960s to the late 1970s can be attributed only in part to immigration; the other part was due to a slowdown in the growth of the California economy relative to that of the rest of the nation. This pattern also suggests that the effect of immigration on net domestic migration flows to California vary over time depending on the state's economic growth relative to that in the rest of the nation.

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[6] These are immigrants who first settled outside of California and eventually moved to California from other parts of the country.

[7] Barff, Ellis, and Reibel (1995) also found a greater effect of immigration on domestic migration flows during 1975–1980 than during 1985–1990 and simply concluded that immigration effects on native migration behavior are unstable over time. They also

There are also significant differences in the pattern of change in net migration rates between native- and foreign-born workers, i.e., immigrants who first went to another state and then later moved to California. In the 1960s and the 1970s, the number of foreign-born workers who came to California from other states relative to those who came directly to California was greater than the analogous ratio for native-born workers. Although the net migration rate for foreign-born workers declined by 23 percent between the 1960s and the 1970s, the decline was lower than that for natives (55 percent). But as immigration continued at an accelerated pace during the 1980s, foreign-born workers' net migration rate to California continued to drop, this time by more than 50 percent, while that of native-born workers increased. By that decade the net migration rate to California had become much lower for foreign- than for native-born workers. This pattern suggests that foreign-born workers' migration patterns within the United States are also affected by cumulative waves of immigration.

Changing Characteristics of Migrants to California. As international immigrants to California have become increasingly less educated (relative to natives), native-born migrants to California from other states have become increasingly more educated. Today, in-migrants

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found that effects are larger in places with disproportionate immigration flows, such as Los Angeles and New York, and suggested that immigration may influence migration flows into and out of a specific geographic area only when immigration to that area passes a certain threshold (p. 22).

are more likely to be well educated than they have been at any other time over the past 30 years.

Net migration rates to California have declined steadily since the late 1960s across all levels of education (Table 9.2). Net migration rates into California of high school dropouts and high school graduate native-born workers, already low in the late 1960s, turned into net outmigration in the 1970s and the 1980s. Net migration to California did

Table 9.2

Net Migration Rates to California, by Education, by Race/Ethnicity, and by Immigration Status, 1965–1990

	Native-Born Workers			Foreign-Born Workers		
Characteristics	1965–1970	1975–1980	1985–1990	1965–1970	1975–1980	1985–1990
Education (years)						
< 12	0.3	–1.7	–2.4	4.3	1.2	–1.5
= 12	3.6	–0.5	0.0	7.5	5.1	1.1
13-15	6.6	3.0	1.8	7.5	4.8	5.0
16 or more	13.6	9.6	6.0	14.9	16.3	10.8
Race/Ethnicity						
Asian						
Japanese, Chinese, Korean, Filipino	2.7	0.8	2.7	8.2	12.4	8.1
Other Asian	5.3	5.5	6.1	15.4	20.1	11.0
African American	12.4	10.5	1.2	16.1	14.5	14.0
Hispanic						
Mexican American	4.6	–5.7	1.0	5.4	–2.2	–1.7
Other Hispanic	7.6	–6.7	0.4	8.4	0.7	–0.5
Non-Hispanic white	3.1	1.6	4.2	4.6	3.1	4.3
Gender						
Female	7.8	3.7	3.9	8.2	4.8	3.1
Male	2.4	0.8	3.2	5.8	5.3	2.3

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980 and 1990.

NOTE: Includes civilian persons age 16 to 64 in labor force. The migration rate is the ratio of annual flow of people divided by the corresponding California population in the labor force at the mid-decade, i.e., 1965, 1975, and 1985. Because the 1960 Census did not ask about race and ethnicity, the migration rates for the 1965–1970 period were estimated using the 1970 population estimates by racial/ethnic groups. The bias introduced by this procedure is expected to be small because immigration was relatively small during the 1960–1970 time period.

decline for native-born workers with some college education, and college graduates as well, in each decade since the 1960s, although these flows of college-educated workers remained positive through 1990.

The changing pattern of internal migration across racial/ethnic groups in part reflects the changing patterns of internal migration across educational groups. Hence, Hispanics who disproportionately lack a college education have experienced the largest decline in their net migration rates to California. Indeed, there was net out-migration of Hispanic native-born workers in the 1970s and of Hispanic immigrants in both the 1970s and 1980s. The propensity of African Americans to migrate to California decreased, most sharply in the 1980s. In contrast, Asian Americans' migration rates to California have increased over time—underlying the continuing concentration of Asian communities in California—as have those of non-Hispanic whites. The latter did experience a drop in their propensity to migrate to California in the 1970s, but that trend was reversed in the 1980s, when their net in-migration exceeded that experienced in the 1960s, somewhat in contradiction to the view that non-Hispanic whites were leaving the state because of the rapid changes in its racial/ethnic composition.

There have also been differences in migration rates between men and women, with the latter exhibiting higher rates than the former in every decade since 1960 and regardless of immigration status. Both men and women, however, display similar trends over time.

Overall, these trends in interstate migration suggest a less-attractive labor market for native-born workers from all levels of education.

Effects on Employment

In addition to moving out of or into the state, native-born workers can adjust to reduced or increased job opportunities by dropping in or out of the labor force and/or by experiencing a higher (lower) rate of unemployment. In examining this issue, we proceed by first examining the long-term trends in labor force participation, unemployment, and the employment rate of native-born men and women, in both California and the rest of the nation. We then present the results of our estimates of the contribution immigration may have made to these trends.

Long-Term Trends. There has been a long-term downward trend in the rate of employment[8] of native-born men in both California and in the rest of the nation for high school dropouts and for high school graduates with no college education (Table 9.3). The reductions

Table 9.3

Changes in Labor Force Participation Rates and Rates of Unemployment, by Immigration Status and by Years of Education, 1970–1990[a] (in percentage points)

	Labor Force Participation		Unemployment Rate		Employment Rate	
Years of Education	Calif.	The Rest of the Nation	Calif.	The Rest of the Nation	Calif.	The Rest of the Nation
Native-born men						
< 12 years	–16.9	–13.9	+3.5	+5.0	–20.4	–18.9
= 12 years	–7.5	–2.1	+2.1	+3.5	–9.6	–8.9
13–15 years	+.1	+4.1	–0.1	+1.9	0.0	+2.2
16 + years	–0.3	–0.7	–0.5	+.8	+0.2	–1.5
All	–1.1	–0.8	+.4	+2.3	–1.5	–3.1
Native-born women						
< 12 years	+3.8	+5.3	+2.3	+3.5	+1.5	+1.8
= 12 years	+12.1	+15.9	+1.3	+2.3	+10.8	+13.6
13–15 years	+19.8	+24.5	+0.1	+1.7	+19.5	+22.8
16 + years	+20.6	+18.3	0.0	+0.6	+20.6	+17.7
All	+20.4	+21.1	+0.4	+1.7	+19.9	+19.4

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

NOTE: Includes men and women aged 16 to 64. Employment rate includes workers who currently were working and those with a job but not working at the time of the interview because of vacation, illness, or other reasons. This measure excludes persons in the labor force but unemployed.

[a] We examined changes in each of the 1970–1980 and 1980–1990 decades. Although the trends have not been linear, they are consistent in their directions, so that considering these two decades separately does not provide additional information.

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[8] The rate of employment is the share of the total population age 16 to 64 who were working at the time of the interview. It reflects changes in both labor force participation and unemployment rates.

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were largest for natives with the least education, 20 percentage points in California and 19 percentage points in the rest of the nation. There has been little change in rates of employment for native-born men who have attended or graduated from college.

In contrast to native-born men, native-born women of all educational levels have increased their rate of employment since 1970. Their pattern of relative increases across years of education, however, is similar to that of native-born men. Native-born women with the lowest level of education experienced the lowest increases in employment rates—1 to 2 percentage points—and those with some college education the largest increases—17 to 20 percentage points.

Both a decline in labor force participation and an increase in unemployment have contributed to the decline in employment rates of less-educated men.[9] The former contributed the largest share—from 60 to 90 percent—of the decline in those employment rates. In other words, as employment opportunities for the less-educated have declined, men have been primarily dropping out of the labor force; i.e., they have become the so-called "discouraged" workers.

For native-born women, increases in labor force participation rates were accompanied by increases in unemployment, most particularly among the least educated. Small gains in labor force participation for female high school dropouts were nearly fully negated by increases in unemployment rates.

Long-Term Trends by Racial/Ethnic Groups. Both African American men and women have been most affected by aggregate trends in employment rates, whatever their level of education. Europeans and Mexican Americans have been least affected by these changes, with Asians and other Hispanics falling in between (Table 9.4). The significance and possible reasons for these differentials are discussed later in this section.

Among high school dropouts and graduates, native-born men of European and Mexican origin experienced the lowest declines in employment rates, and African Americans experienced the largest.

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[9] The employment rate is the share of the 16–64-year-old population employed at the time of the Census. It is equal to the labor force participation rate minus the unemployment rate.

Table 9.4

Rate of Employment for Native-Born Men and Women, in California and the Rest of the Nation, by Years of Education and Race/Ethnicity, 1970–1990 (in percentage)

	Men				Women			
	1970		1990		1970		1990	
Origin	Calif.	The Rest of the Nation	Calif.	The Rest of the Nation	Calif.	The Rest of the Nation	Calif.	The Rest of the Nation
High school dropouts								
Non-Hispanic white	69	74	51	57	34	36	37	41
African American	57	66	28	41	35	40	24	33
Asian American	61	64	35	39	38	41	31	40
Mexican American	67	72	49	55	28	29	33	34
Other Hispanic	69	72	42	49	33	29	35	31
All	67	73	47	54	33	37	35	38
High school graduates								
Non-Hispanic white	87	90	80	83	48	49	66	64
African American	77	82	58	67	53	58	49	59
Asian American	88	88	70	73	57	62	60	66
Mexican American	83	88	75	78	49	53	61	62
Other Hispanic	88	89	71	73	51	49	60	60
All	86	89	76	80	48	50	59	63
13–15 years								
Non-Hispanic white	84	80	85	84	51	49	72	72
African American	81	76	75	73	65	59	70	72
Asian American	79	75	80	78	58	57	75	74
Mexican American	85	79	85	82	64	52	76	75
Other Hispanic	85	82	79	77	63	56	73	71
All	83	80	84	82	53	49	72	72

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

NOTE: Includes men and women age 16 to 64. Employment rate includes workers who currently were working and those with a job but not at work at the time of the interview. The rate excludes persons in the labor force but unemployed.

For instance, African American male high school dropouts and high school graduates experienced a 29 and 19 percentage point decline, respectively, in their employment rates in California, declines that were in excess of 60 percent higher than those experienced by non-Hispanic whites. High school dropouts and high school graduates of Asian and other Hispanic origin experienced declines somewhat comparable to African Americans. The results are increased disparities in employment rates between non-Hispanic whites and Mexican Americans on the one hand and African Americans on the other. By 1990, 55 percent of non-Hispanic white and Mexican American male high school dropouts were employed in the rest of the nation compared with only 40 percent of African Americans. In California, employment rates were even lower and the disparity larger, with about 50 percent of non-Hispanic white and Mexican American male high school dropouts employed compared to 28 percent of African American male high school dropouts.

Although 1990 employment rates of high school graduates are higher than those of high school dropouts, ranging between a low two out of three for African Americans and four out of five for non-Hispanic whites, the disparities between these two groups are just as large and have also increased significantly over time.

The pattern of relative increases in employment rates for native-born women of different racial/ethnic origins mirrors that of men. The increases in employment rates of native-born women of European and Mexican origin exceeded those of other native-born women. Among high school dropouts, European and Mexican American native-born women experienced increases in employment rates between 1970 and 1990, while all other groups experienced declines. Indeed, at the other extreme, African American female high school dropouts saw their rates of employment decline in absolute terms, from one out of three to one out of four in California. Similarly, the increase in employment rates for African American women with a college education or more were from 20 to 50 percent lower than those of other women.

Contribution of Immigration to Employment Trends. As noted earlier, we used two approaches to assess the contribution of immigrants to these employment trends. We (1) compared the pattern of change in employment rates of native-born men and women in

California and those in the rest of the nation (Estimate I in Table 9.5) and (2) estimated the expected changes in employment rates due to immigration in California based on a multivariate model associating changes in share of immigrants to changes in employment rates across 124 labor markets (SMSAs) in the country (Estimate II in Table 9.5).[10] Surely, it is difficult to isolate the relative contribution of immigration to the decline of employment rates, most particularly those of low-skill native-born men over the past 20 years. Many factors other than immigration may affect the changes in employment of native-born workers. Even though we have tried to control for them, we cannot be sure we have been fully successful. In particular, during this period, low-skill workers in the United States have encountered increasing competition from low-skill workers abroad, most particularly, Asia and Mexico. As a result, the relative demand for low-skill labor by California and U.S. employers has declined steadily, as was shown in Chapters Six and Seven.

Our results suggest that the effects on employment rates of high levels of immigration to California have varied depending on level of education and racial/ethnic groups from no effects at all to contributing up to 40 percent of the decline in employment rates. For instance, we estimated that the contribution of immigration to the decline of the 1970–1990 employment rates of high school dropout African American men in California ranged from 4.7 to 6.2 percentage points compared with a total decline of 29.1 percentage points, or from 15 to 20 percent of that decline. For male Hispanic high school dropouts, immigration was estimated to have contributed from 2 to 4 percentage points, or 10 to 20 percent of the total 20 percentage points decline in their employment rates.

- **A level-of-education effect.** The effect on native high school dropouts and high school graduates was larger than on those with some college education. Indeed, the increase in employment for California's college graduates relative to those in the rest of the nation, shown in Table 9.3, suggests that California's college graduates may have benefited from immigration through increased employment rates. This is consistent with findings in

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[10] See Appendix D for regression results.

Table 9.5

Estimates of Immigrants' Effects on Employment Rates of Native-Born Workers, by Educational Level, Gender, and Racial/Ethnic Groups, in California, 1970–1990 (percentage points)

	1970–1980		1980–1990		Total 1970–1990		Share of Total Change in Employment Rate Due to Immigration[a] (%)
Racial/Ethnic Group	Estimate I	Estimate II	Estimate I	Estimate II	Estimate I	Estimate II	
Males							
High school dropouts							
Non-Hispanic white	+1.4	-2.1	-2.7	-3.3	-1.3	-5.4	7–30
African American	+0.3	-2.1	-5.0	-4.1	-4.7	-6.2	16–21
Hispanic	-2.1	-4.2	+0.1	0	-2.0	-4.2	10–22
High school graduates							
Non-Hispanic white	0	0	-0.3	-2.3	-0.3	-2.3	5–33
African American	+1.5	-3.4	-5.8	-4.2	-4.3	-7.6	22–40
Hispanic	0	0	+2.3	-3.9	+2.3	-3.9	0–41
Females							
High school dropouts							
Non-Hispanic white	-1.2	0	-0.5	-3.2	-1.7	-3.2	30–45
African American	-1.0	0	-3.0	-2.3	-4.0	-2.3	21–36
Hispanic	+2.2	-4.4	-2.1	-4.3	+0.1	-8.7	0–65
High school graduates							
Non-Hispanic white	+1.6	+2.8	-4.2	-2.6	-2.6	+0.2	0–13
African American	+1.9	-4.7	-7.3	-2.5	5.4	-7.2	0–100
Hispanic	+4.2	0	-0.1	0	+4.1	0	0

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

NOTE: Estimates I are the difference between change in employment rate in California and that in the rest of the nation for the period considered. Estimates II are based on a multivariate analysis of the relationship between change in share of immigrants and change in employment rates across 124 SMSAs during the period considered. Estimates II that are different from zero are statistically significant.

[a] This share is the ratio of Estimates I and Estimates II divided by the total 1970–1990 change in California employment rate derived from Table 9.4.

the literature that immigrants and native-born college graduates may complement one another in the work force.

Even though the magnitude of effects vary between the two estimates, the results of both approaches are consistent in suggesting the following:[11]

- **A racial/ethnic effect.** African Americans, both men and women, were disproportionately affected in the 1980s, although not during the 1970s. The employment rates of African American men were the lowest of all racial/ethnic groups in 1970 and still were the lowest in 1990, but the gap with other groups had increased regardless of level of education. In 1970, African American women's employment rates exceeded those of Hispanic women. By 1990, the reverse had taken place, also regardless of level of education.
- **A gender effect.** The relative size of the effects was generally larger on native-born women than on native-born men most particularly among high school dropouts. African American women were estimated to be more affected than any other groups, men or women (last column of Table 9.5).
- **A cumulative, or time, effect.** The size and frequency of the negative effects were greater in the 1980s when immigration was twice as large as it was in the 1970s and employment growth was slower.[12]

The above estimates of reductions in native-born employment due to immigration may be underestimated, however. The reason is that the labor market is national in nature. Workers, both native and foreign born, can move anywhere in the United States. Should job opportunities for natives decline in California because of high levels of immigration, some residents of California may leave, while natives in the rest of the country may decide not to move into California. This is exactly what has taken place, as was shown in the previous section. Hence, over time, we would expect an "evening out" of employment rates between California and the rest of the nation. This dynamic adjustment through internal migration across states and labor market areas within the whole nation suggests that (1) a comparison of employment rates across areas at one point in time will underestimate the total effects of immigration on employment rates. Such a comparison measures the "frictional" effects of immigration, i.e., the fact that adjustments are not made instantaneously because of the high pecuniary and non-pecuniary costs of moving; and those costs are proportionately higher for less-educated workers than for college-trained workers; and (2) changes in job opportunities for native-born workers due to immigration will be reflected primarily in changes in movements of workers in and out of areas highly affected by immigration, as shown in the previous section.

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[11] Clearly, the fact that the results of both approaches are consistent with one another, rather than conflicting, lends greater credence to them.

[12] Potential reasons for this variation at different points in time are discussed later in the chapter.

A further indication that native-born male high school dropouts were significantly affected by immigration is provided in Table 9.6. Among high school dropouts, the decline in relative employment rates for native-born men was twice as large as that for immigrant men in both California and the rest of the nation, while the relative

Table 9.6

Changes in Employment Rates, by Immigration Status, Years of Education, and Gender, 1970–1990 (percentage points)

	California		The Rest of the Nation	
Years of Education	Immigrant	Native Born	Immigrant	Native Born
Men				
< 12	–8	–20	–9	–19
= 12	–8	–10	–9	–9
13–15	–1	0	+2	+2
> 16	0	0	–4	–1
Women				
< 12	+6	+2	+4	+2
= 12	+8	+11	+9	+14
13–15	+11	+20	+15	+23
> 16	+15	+21	+10	+18

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

increase in employment rates for immigrant women was two to three times larger than those for native-born women. Across race/ethnic groups, this pattern is particularly strong for immigrants of Hispanic origin, who constitute the bulk of immigrants to California with less than 12 years of education. Whereas the employment rates of Hispanic immigrant men declined by 1 to 9 percentage points between 1970 and 1990, the decline for native-born and other immigrant men ranged from 18 to 33 percentage points, several times as large (Table 9.7).

For women the pattern is similar. Whereas the employment rates of Hispanic immigrant women high school dropouts increased by about 10 percentage points, those of native-born and most other immigrant women were half or even less.

This pattern is consistent with employers' stated preferences for immigrant labor, which was noted in Chapter Eight (see also Grant,

Table 9.7

Change in Employment Rates of Persons with Less than 12 Years of Education, by Immigration Status, Gender, and Racial/Ethnic Group, 1970–1990 (percentage points)

	California		The Rest of the Nation	
Gender, Racial/ Ethnic Group	Immigrant	Native Born	Immigrant	Native Born
Men				
Non-Hispanic white	–23	–18	–12	–17
African American	–33	–28	–15	–23
Asian American	–26	–26	–14	–25
Mexican American	–4	–19	–1	–17
Other Hispanic	–5	–26	–9	–23
All		–20		–19
Women				
Non-Hispanic white	–3	+4	+5	+5
African American	–5	+1	–4	–7
Asian American	–2	–7	+14	–1
Mexican American	+9	+5	+11	+5
Other Hispanic	+10	+2	+2	+4
All	+6	+2	+4	+2

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

Oliver, and James, 1996). It is also consistent with the documented pattern of "network" hiring within ethnic groups, most particularly among low-skill workers, as the size of these groups increases. Indeed the two largest groups in California and the rest of the nation, non-Hispanic whites and Hispanics, are the two groups who have experienced the lowest decline in employment rates among native-born men and the highest increases among native-born women, not only among high school dropouts but across all levels of education.

Few other studies have sought to estimate the effects of immigration on employment of native-born workers. Three earlier studies focusing on the 1970–1980 decade found no or "small" effects. Mueller and Espenshade (1985) concluded that, in California, Mexican immigrants and African Americans were complements, rather than substitutes, for one another. Similarly, McCarthy and Valdez (1986) found no evidence that Mexican immigrants had affected the employment prospects of other groups of workers in the Los Angeles area. And Altonji and Card (1991) found little evidence that "inflows of immigrants had large or systematic effects on the employment or unemployment rates of less skilled workers" at the national level. Although, unlike these studies, we do find an effect of immigration on employment during the 1970–1980 decade, we did find this effect to have been smaller than that estimated for the 1980–1990 decade. For the latter decade, two recent studies are consistent with not only the direction, but also the relative magnitude, of effects. Card (1996) estimated that a one percentage point increase in the share of immigrants in the nation led to a 0.6 to 1.6 percent decline in employment rate during the 1980–1990 decade. Applying this estimate to California's 9 percentage point increase in share of immigrants, we find that this estimate translates into a decline in employment rate of 5.4 to 14.4 percent or between 2.5 and 8.3 percentage points, well within the range of our own estimates.[13] Similarly, Ong and Valenzuela (1996) found that Hispanic immigration into Los Angeles contributed between 25 and 37 percent to the increase in unemployment rates of less-educated African American males age 18–64, relative to other metropolitan areas. Our own estimate similarly ranged between 16 and 40 percent (Table 9.5).

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[13] Because Card's groupings of native-born workers differs from our own, only an approximate comparison can be made.

How Many Native-Born Workers Were Displaced by Immigrants? Applying the estimated effects of immigration on employment rates shown in Table 9.5 to changes in the size of the respective educational and racial/ethnic groups in California, we can provide estimates of the additional number of natives who would be employed had there been no immigration since 1970. These estimates are presented in Table 9.8.

Our estimates of the number of native-born workers who had withdrawn from the labor force, or were unemployed in 1990 because of immigration, range from a low of 128,000 to a high of almost 195,000, or between 1.0 and 1.3 percent of California's adult native population aged 16 to 64. These estimates also suggest that for every 100 immigrants in the labor force in California, 4 to 6 native-born workers may have withdrawn from the labor force or become unemployed.

Table 9.8

Aggregated Estimates of the Number of Native-Born Workers Whose Job Opportunities Were Affected by Immigrants, in California, 1990

Years of Education and Gender	Estimate I	Estimate II
Men		
< 12	-14,600	–47,800
= 12	–13,900	-53,200
13–15	–55,300	-300
16 +	+23,700	0
Subtotal	–60,100	-101,300
Women		
< 12	–2,800	–44,800
= 12	-57,500	–4,200
13–15	–50,200	–44,400
16 +	+42,400	0
Subtotal	–68,100	–93,400
Total	-128,200	–194,700

SOURCE: Compiled from results in Table 9.5 and Appendix B.

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Summary

Increased immigration into California has coincided with a decline in net in-migration to California across all levels of education. Also, relative net in-migration of non-Hispanic whites to California has increased while that of African Americans and Hispanic Americans has declined. These patterns are consistent with some substitution of immigrants for native-born workers in the California labor market.

California native-born workers' employment rates were lowered by immigration; the least educated—high school dropouts and high school graduates—were most affected. Both men and women were affected. Among racial/ethnic groups, African American men and women were relatively more affected than other groups regardless of the level of education. Overall, non-Hispanic whites and Hispanic Americans were seemingly least affected, especially among the least educated, a phenomenon we attribute in part to the prevalence of hiring by word of mouth through networks among these two largest groups of workers.

The two estimating techniques used here agree on the negative direction of the effect of immigration on less-educated native-born workers' employment opportunities. We estimated that the number of native-born workers who had withdrawn from the labor force, or were unemployed in 1990 because of immigration, ranged from a low 128,000 to a high 195,000. This amounts to 4 to 6 natives not employed in California for every 100 immigrants working in the state.

These estimates of negative effects of immigration on employment of native-born workers are arguably not large in an economy that employs in excess of 15 million persons and has had from 900,000 to 1 million unemployed at any one time. Also, were California to lose its low-wage immigration labor, goods that continue to be produced in California, such as apparel and textiles, might be produced elsewhere, in Mexico or Asia. Indeed, many such labor-intensive jobs have already been transferred offshore—some of them under the North American Free Trade Agreement (NAFTA)—and many more are likely to follow in the future. The effect of such transfers of jobs offshore would be similar to the effects of imports, i.e., it would also negatively affect job opportunities of native-born workers, at least in the short term. And it is not clear whether this effect would be greater, smaller, or the same as the effect of less-educated immigrant labor to California.[14]

EFFECTS ON EARNINGS

In addition to affecting native-born workers' job opportunities, immigration can also affect the earnings of both native- and foreign-born workers. We would again expect that, if immigration had any effect, it would have affected the earnings of the less-educated disproportionately to other groups in the labor force. As we did in the previous section, we first examine the long-term trends in the real weekly earnings of natives in both California and the rest of nation.[15] Then, we present the results of our estimates of the contribution immigration may have made to these trends.

Long-Term Earning Trends by Educational Level

The 1969 to 1989 trends in real weekly earnings have differed sharply between native-born men and women and across levels of education (Table 9.9). All native-born men experienced a decline in real weekly earnings with the exception of college-educated men. High school dropouts lost the most ground, experiencing a 17 to 24 percent decline over the 20-year period, or an equivalent of $74 to $130 per week in 1989 dollars. High school graduates and men with some college education experienced smaller declines, and college graduates experienced a modest real growth, ranging from a low of $10 to a high of $43 of weekly earnings over that period of time.

The size of the decline in men's earnings was more than twice as large during the 1980s as during the 1970s for both high school dropouts and graduates. The reverse pattern was true for both men with some college education and college graduates. These latter groups saw their real earnings decline during the 1970s. During the 1980s, college graduates more than made up for the ground they had

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[14] We are grateful to Stephen Levy for pointing out this potential trade-off between import of lower-wage immigrant labor and exports of low-wage jobs offshore.

[15] Results using hourly wage are similar to the one we discuss here focusing on weekly earnings.

Table 9.9

Percentage of Changes in Real Weekly Earnings of Native-Born Workers, by Gender and Education, in California and the Rest of the Nation, 1970–1990

Gender and Years of Education	1969–1979		1979–1989		1969–1989	
	Calif.	The Rest of the Nation	Calif.	The Rest of the Nation	Calif.	The Rest of the Nation
Native-born men						
< 12	-8.5	-2.6	-16.9	-15.0	-24.0	-17.2
= 12	-3.7	-2.8	-8.1	-9.8	-11.5	-12.3
13–15	-3.4	-4.7	+0.7	-1.9	-2.7	-6.5
16 +	-8.3	-10.7	+14.0	+13.1	+4.5	+1.1
All	-0.1	+1.4	+7.5	+4.1	+7.3	+5.5
Native-born women						
< 12	-4.8	0	-5.7	-10.5	-10.2	-10.8
= 12	-0.3	-1.7	+3.4	0.3	+3.1	-1.3
13–15	+1.9	-1.8	+11.9	+7.9	+14.0	+5.9
16 +	-10.2	-14.2	+21.3	+19.2	+8.9	+2.2
All	+1.6	+1.3	+18.8	+13.8	+20.7	+15.3

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970, 1980, and 1990.

NOTE: Includes civilian persons aged 16 to 64 in the labor force who had earnings in week preceding interview. Because of significant changes in the distribution of the labor force by level of education (see Chapter Six), the percent changes for "all" may appear to be at odds with the overall average by level of education.

lost in the previous decade, while men with some college education simply did not lose further ground with regard to their earnings.

The net result of these trends has been a sharp increase in the earnings disparity among men with different levels of education, most particularly in California. There, the ratio of earnings between college graduates and high school dropouts increased from 1.9 in 1969 to 2.6 in 1989 compared with 2.1 and 2.5 for the same years in the rest of the nation. This widening of the earnings disparity among male workers has been well documented in recent studies conducted at the national level (Karoly, 1996; Mishel and Bernstein, 1994; U.S. Department of Commerce, 1996); and in California (Reed, Glenn, Haber, and Mameesh, 1996).

Trends in real earnings during the 1969 to 1989 period have been more favorable for native-born women than for native-born men:

An overall net decline in real earnings was experienced only by female high school dropouts, and even this decline was half of that experienced by men. The earnings of female high school graduates increased 3.4 percent during 1979–1989, at the same time that California native-born men saw their earnings decline by 8 percent. And women with some college education saw their earnings increase, as did female college graduates.

The net result of these trends has been a progressive closing of the earnings gap between men and women in both California and the rest of the nation. Overall, the ratio of native-born women's earnings to those of native-born men increased from .54 in 1969 to .61 in 1989, 7 percentage points in California; in the rest of the nation it increased from .53 to .58 percent, or by 5 percentage points.

Trends in real earnings have been even less favorable for immigrant than native-born workers, most particularly for immigrant men (Table 9.10). Real earnings of immigrant men have declined from 1 to 15 percentage points, more rapidly than those of native-born men, depending on location and levels of education. The lowest difference was experienced by college graduates in the rest of the nation, and the largest discrepancy was experienced by high school graduates in California. This differential pattern in men's earnings by immigration status is consistent with findings in the literature suggesting that the effects of increases in the number of immigrants on workers' earnings are larger for the immigrants themselves than for natives (Vernez, 1991).

Table 9.10

Difference in Rate of Change in Real Weekly Earnings Between Immigrant and Native-Born Workers, by Gender and by Education, in California and the Rest of the Nation, 1969–1989 (in percentage)

	Men		Women	
Years of Education	Calif.	The Rest of the Nation	Calif.	The Rest of the Nation
< 12	–4.8	–6.1	+0.2	+6.4
= 12	–15.0	–3.9	–8.6	+4.4
13–15	–7.0	–7.5	+0.8	+2.1
16+	–4.5	–0.6	+13.4	+5.5

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970 and 1990.

By contrast, women experienced a reverse pattern, with immigrant women typically experiencing a higher rate of growth (or lower rate of decline) in real earnings than native-born women (Table 9.10). This reverse pattern was more pronounced in the rest of the nation than in California. The differential in average real earnings between these two groups of women was typically smaller than that for men.

Long-Term Trends by Racial/Ethnic Groups

Trends in real weekly earnings have been more favorable to African Americans, both men and women, than to any other racial/ethnic groups (Table 9.11), especially among high school dropouts and high

Table 9.11

Percentage Change in Real Weekly Earnings of Native-Born Workers, by Gender, Education, and Racial/Ethnic Groups, in California and the Rest of the Nation, 1969–1989

	Men		Women	
Level of Education and Racial/Ethnic Group	Calif.	The Rest of the Nation	Calif.	The Rest of the Nation
High school dropouts				
Non-Hispanic white	-24.0	-20.0	-15.6	-17.2
African American	-9.1	+5.0	+9.6	+16.7
Asian American	-44.9	-41.8	-26.5	-24.0
Mexican American	-17.6	-2.0	-1.1	+8.0
Other Hispanic	-27.1	-8.8	-9.1	-6.2
High school graduates				
Non-Hispanic white	-8.3	-10.9	+1.4	-3.3
African American	-6.1	-3.6	+16.0	+11.1
Asian American	-19.7	+.8	+1.7	-9.9
Mexican American	-7.9	-10.0	+11.3	-3.5
Other Hispanic	-3.9	-8.3	+8.3	+4.7
Workers with some college education				
Non-Hispanic white	-.9	-5.6	+14.5	+5.6
African American	+5.4	+2.8	+12.8	+8.5
Asian American	+2.7	0	+20.8	+14.5
Mexican American	+4.6	+3.2	+12.1	+8.0
Other Hispanic	-2.1	-7.2	+17.8	+11.7

SOURCE: U.S. Department of Commerce, *Public Use Sample*. 1970, 1980, and 1990.

NOTE: Includes civilian persons age 16 to 64 in the labor force whohad earnings in week preceding interview.

school graduates. High school dropout African American men and women experienced increased real earnings between 1969 and 1989 whereas all other racial/ethnic groups experienced often large declines. The only exception is for African American men in California, whose 9 percent decline in real earnings is still smaller than that for any other racial/ethnic group. Among California men, college educated African Americans saw their real earnings increase more rapidly than those of any other racial/ethnic group. All of the relative gains in earnings of African Americans relative to non-Hispanic whites were made during the 1970 decade in large part due to affirmative action (Smith, 1993).

By contrast, non-Hispanic white native-born workers, both men and women, and less-educated Asian Americans experienced the least favorable pattern of growth in real earnings. This pattern of change in real earnings across racial/ethnic groups is particularly noteworthy because it is contrary to the pattern of change in employment rates observed earlier. With respect to employment rates, whites and Mexican Americans experienced the most favorable pattern and African Americans the worst. This suggests the existence of an adjustment trade-off between levels of employment and earnings that differed across racial/ethnic groups during the 1969–1989 period considered by this study. African Americans saw their employment rates decline most during the 1969–1989 period, but saw the earnings of those remaining in the labor force decline the least. In contrast, non-Hispanic whites and Asian Americans, who saw their employment rates decline the least during that same period, saw their real earnings decline the most.

Contribution of Immigration to Earnings Trends

We used the two approaches described at the outset of this chapter to estimate the effects of immigration on native-born workers' earnings. Both of these approaches, shown in Table 9.12, agree that during 1969–1979 immigration negatively affected the earnings of native-born male and female high school dropouts and the earnings of male high school graduates. For instance, we estimated that earnings of African American male high school dropouts in 1979 California would have been 10 to 16 percent, or $2,250 to $3,800, higher per year without immigration. Annual earnings of non-Hispanic white

Table 9.12

Estimates of Immigration's Effects on Earnings of California Native-Born Workers, by Gender, Education, and Racial/Ethnic Groups, 1969–1989 (in percentage)

Gender and Years of Education	1969–1979		1979–1989	
	Estimate I[a]	Estimate II[b]	Estimate I[a]	Estimate II[b]
Males				
High school dropouts				
Non-Hispanic white	–3.9	–8.5	–1.0	0
African American	–16.6	–10.5	+0.9	0
Hispanic American	–17.4	–12.5	–0.6	0
High school graduates				
Non-Hispanic white	–0.2	–3.7	+2.8	0
African American	–9.0	–13.0	+1.8	0
Hispanic American	–12.2	–12.9	+11.9	0
Some college				
Non-Hispanic white	+1.9	–5.5	+3.3	0
African American	–1.3	0	–3.6	0
Hispanic American	+1.6	NA	+0.3	0
Females				
High school dropouts				
Non-Hispanic white	–5.0	–11.9	+6.7	+6.9
African American	–14.0	–28.3	+5.1	–8.0
Hispanic American	–9.4	–30.7	–0.3	0
High school graduates				
Non-Hispanic white	+0.9	–3.1	+4.3	0
African American	+4.5	–16.1	+0.6	+6.0
Hispanic American	+9.8	–10.9	+15.0	0
Some college				
Non-Hispanic white	+4.6	–4.5	+6.7	+2.6
African American	–0.5	0	+4.7	0
Hispanic American	–0.5	0	+4.0	0

SOURCE: U.S. Department of Commerce, *Public Use Sample*. 1970, 1980, and 1990.

NOTES: Zero means no statistically significant effect.

[a] Estimates I are the difference between changes in real earnings in California and those in the rest of the nation for the period considered.

[b] Estimates II are based on a multivariate analysis of the relationship between changes in earnings and changes in share of immigrants across 124 SMSAs, during the period considered (see details in Appendix B).

male high school dropouts would have been 4 to 8 percent, or $1,100 to $2,200, higher.

In contrast to our estimates of effects earning during the 1970s, both of these approaches suggest that there was no further negative effect on earnings of native-born men and women during 1979–1989.

Finally, both of our estimate approaches agree that native-born workers with some college education and college graduates (not shown in the table) were generally not negatively impacted in either decades and may even have been positively affected.

Our estimates are consistent in suggesting the following:

- **A period effect.** Immigration affected earnings of native-born workers during the 1970s, but not during the 1980s.[16]
- **A level-of-education effect.** The earnings of high school dropouts and high school graduates were primarily affected. Native-born workers with some college education and college graduates were generally not negatively affected and may even have been positively affected.
- **A racial/ethnic effect.** The earnings of African American and Hispanic American men and women were disproportionately affected.[17]
- **A gender effect.** The earnings of female high school dropouts were more affected by immigration than those of male high school dropouts. The reverse is true for high school graduates.

Our findings for the 1969–1979 period are consistent with the findings of Mueller and Espenshade (1985) and McCarthy and Valdez (1986). Both of these studies concluded that Mexican immigration had slowed the rate of growth of wages in California in general, and in Los Angeles in particular, relative to those in the nation during the 1970–1980. Our estimates are also similar to those found in other studies of the 1969–1979 time period for the nation as a whole

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[16] Potential reasons for this variation over time are discussed in the next section.

[17] Altonji and Card (1991) also found that the earnings of low-skill African Americans were more affected than those of non-Hispanic whites.

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(Altonji and Card, 1991; Borjas, Freeman, and Katz, 1996). They estimated that a one percentage point increase in the share of immigrants would reduce wages of less-skilled workers—high school dropouts and high school graduates only—in the range of 1.2 to 1.5 percent. Considering that the immigrant share in California increased by 6.2 percentage points—from 10.4 to 16.6 percent—these estimates translate into a reduction in weekly earnings of low-skill native-born workers of 7.4 to 9.3 percent. These estimates are only slightly lower than our own estimated average for low-skill workers of 12.4 percent. While the magnitude of the effect of immigration on earnings remains somewhat imprecise, the direction of that effect is, however, not in doubt. While there is general consensus on the downward effects of immigration on the earnings of native-born workers during 1970–1980, there is not yet such a consensus during 1980–1990. As noted above, while we found a significant downward effect of immigration on employment rates of natives, we did not find a similar effect on earnings. Our findings are consistent with Card (1996), who also estimated a larger effect on employment during that decade than on earnings, which he estimated to range between zero and 1 percent. These findings contrast with Jaeger (1995) and Borjas, Freeman, and Katz (1996) who estimated a downward effect on the wages of high school dropouts of 1.2 to 1.5 percent for every one percentage point increase in immigrant share during the 1980s–1990s.

POTENTIAL REASONS FOR DIFFERENCES OF EFFECTS ON EARNINGS AND EMPLOYMENT RATES

Our estimates of the effects of immigration on earnings are generally similar to the effects of immigration on employment rates discussed earlier in this chapter. Both effects were felt primarily by native-born workers with low levels of education, i.e., high school dropouts and high school graduates with no college education. Also, both effects were larger for native-born women than for native-born men. And both effects were felt more by African Americans than by other racial/ethnic groups. Hence, our estimates generally suggest that immigration, if it affects a group of workers at all, will typically affect both their earnings and their employment opportunities.

Our estimates also suggest that effects on employment and earnings have differed over time for the same group of workers. We estimated that immigration affected employment rates of some native-born workers more in the 1980s than in the 1970s, while we estimated the reverse pattern for the effects on earnings; the latter were affected in the 1970s and not at all in the 1980s.

Finally, comparison of our estimates of effects on earnings and employment rates suggests that (1) affected native-born women may make different trade-offs between earnings and employment rate than native-born men and (2) both the earnings and employment rates of less-educated African Americans were affected by immigration, while only the earnings of less-educated Hispanic Americans were affected. Below, we discuss possible reasons for these differential patterns over time and between racial/ethnic groups.

Period Differences

Why did native-born workers affected by immigration make a different trade-off during the 1970s than during the 1980s? One potential explanation for a larger effect on earnings than on employment rates in the 1970s and a reverse pattern in the 1980s is that employment growth was much higher in the 1970s than in the 1980s (Chapter Six). Hence, during the 1970s, workers, and particularly women, may have been drawn into or remained in the labor force because of higher job opportunities. At the same time, the net real earnings of women remained relatively constant during that decade—despite the negative effects of immigration—drawing more of them into the labor force. This may explain why the employment rates of less-educated women were not significantly affected by immigration during the 1970s while those of men were somewhat negatively affected (Table 9.5).

During the 1980s, by contrast, demand for labor declined somewhat and real earnings of less-educated workers, most particularly men, declined at a rate several times faster than during the preceding decade—mostly for reasons other than immigration. At the same time, immigration, and hence the supply of labor, accelerated, particularly among the less educated, leading to a loosening of the labor market. Confronted with both lower real earnings and greater competition for jobs, more native-born workers may have chosen to leave the labor market altogether or decided not to enter it.[18]

Other potential explanations, including changes in government requirements, such as the minimum wage, and in union membership do not square with the facts. The minimum wage declined in real terms between the first and the second decades, so that earnings adjustments due to immigration would have been more difficult to make during the first than the second decade. Indeed, the proportion of workers earning no more than the minimum wage declined from 13 percent to 5 percent between 1979 and 1989 (U.S. BLS, 1991). Still, earnings were affected by immigration more during the first than the second decade.

Similarly, the proportion of workers covered by union contracts decreased during the two decades, so that we would again expect earnings adjustments to be less likely and employment adjustments more likely to be made during the first than the second decade (Freeman, 1993). Again, the actual pattern was the reverse.

Racial/Ethnic Differences

Representatives of the African American community have often held that African Americans were negatively and disproportionately affected by immigration. Our findings are consistent with these perceptions. Not only were the earnings of African Americans more affected than those of non-Hispanic whites during the 1970s (if not during the 1980s), their rates of employment were more affected than those of Hispanic Americans during the 1970s and those of both non-Hispanic whites and Hispanic Americans during the 1980s, especially for African American high school graduates.

Native-born Hispanic Americans' earnings and employment rates were also disproportionately impacted relative to those of non-Hispanic whites, but only during the 1970s. During the subsequent decade, native-born Hispanic employment rates were significantly less affected than those of African Americans and somewhat less than non-Hispanic whites with similar levels of education.

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[18] Similarly, in their study of local labor market dynamics and effects of immigration on African Americans, Bean, Fossett, and Park (1994) concluded that "looseness" or "tightness" of local labor markets may influence the extent of market competition among workers at any one location, and by implication at any one time at any one location.

One possible explanation for these variations across racial/ethnic groups is that the degree of substitution of immigrants for native-born workers may vary across racial/ethnic groups of similar education. That may be the case if, for instance, network hiring prevailed among the less educated, as was suggested in Chapter Six. As the number of Hispanics has grown both absolutely and in their proportion of the labor force, the proportion of African Americans has remained constant, at less than 1 in every 10 workers. As a result, network hiring is likely to benefit the first group of workers at the expense of the second. This changing pattern may also explain why Hispanic employment rates were more impacted by immigration during the 1970s in the early stages of heavy Hispanic immigration into the state than during the 1980s, when Hispanic immigration had matured.

Employer preference for non-Hispanic white and Hispanic workers rather than African American workers could also explain the patterns described above. In Chapter Eight, we documented how employers indicated having a higher regard for the work attitudes and ethics of immigrant than native-born workers. Since employers do not necessarily know whether a potential employee is foreign born or not, they may ascribe these characteristics to racial/ethnic groupings. To the extent this is taking place, these characteristics would be more likely to be ascribed to Hispanics as a group than to African Americans with whom they may compete for jobs.

Institutional factors that constrain downward adjustments of wages may also have contributed to the pattern observed above. The minimum wage in 1989 was still of greater significance to African Americans than to any other groups: They were more likely than non-Hispanic whites and Hispanics to be working for the minimum wage, 10.6 versus 7.6 and 8.3 percent, respectively (U.S. Department of Commerce, 1991). The fact that African Americans experienced the largest employment effects in the 1980s and the 1970s is consistent with the hypothesis that the minimum wage law has exacerbated the employment effects of immigrants on African Americans. The other factor is union membership. Although unionization has declined over time, African Americans are still more likely than non-Hispanic whites and Hispanics to participate in unions, 27 versus 19 percent, respectively (U.S. BLS, 1991). The resulting rigidity in their earnings would be expected to cause African Americans' employment rates to be disproportionately affected relative to those of other groups.

Also, an apparent inconsistency in the earnings trends of African Americans needs to be addressed. The net real earnings of African Americans high school dropouts and high school graduates declined less during the 1970s and 1980s than those of other racial/ethnic groups in California and in the rest of the nation (Table 9.11). At the same time, we have estimated that their earnings were disproportionately affected by immigration. This apparent inconsistency suggests that the effects of immigration on African Americans earnings were all, or in part, compensated by changes in other factors that affected earnings in an opposite direction to that of immigration. Several of these factors were already discussed above, including the greater coverage for African Americans by minimum wage laws and unions than for other ethnic groups.

Another factor is affirmative action. Smith (1993) documents that affirmative action had a large effect in accelerating African American male wage gains relative to non-Hispanic whites during the early 1970s. Indeed, the real earnings of African American high school dropouts and high school graduates increased by 1 percent each during that decade, while those of non-Hispanic whites decreased by 8.6 and 2.6 percent, respectively for high school dropouts and graduates. Both groups saw their real earnings decline during the 1980 decade in roughly similar proportions, 8 to 9 percent (Tables C.5 and C.6, Appendix C).

Finally, it may also be due to the trade-off African Americans are making between employment and earnings. On the one hand, African American men in California suffered larger declines in employment rates than any other groups. For instance, the employment rate of African American male high school dropouts dropped from 57 percent in 1970 to 28 percent in 1990, and that for high school graduates dropped from 77 percent in 1970 to 58 percent in 1990. On the other hand, those who remained in the labor force saw their earnings decline less or increase more than those of any other racial/ethnic groups. Thus, by 1990 the earnings gap of African American male high school dropouts and high school graduates relative to non-Hispanic whites had declined dramatically from $130 to $17 a week for high school dropouts, and had declined somewhat less from $170 to $140 weekly for high school graduates. African American women's earnings were 7 to 9 percent lower than those of white women in 1969; by 1989, their earnings exceeded those of white women by 3 percent for high school graduates and 20 percent for high school dropouts.

CONCLUSIONS

Although large-scale immigration has benefited California employers and its economy more generally, it has done so at a cost to some native-born workers as well as to the immigrants themselves. These costs have been borne primarily by high school dropouts and high school graduates in the form of reduced earnings and job opportunities. Reduced job opportunities, in turn, have resulted in lower labor force participation, higher unemployment rates, and/or lower net migration of out-of-state workers into California for some groups of native-born workers.

The effect of immigration on labor market outcomes for California's native-born workers has differed over time. During the 1970s, immigration primarily affected the earnings of less-educated workers and the net migration rate of workers from other states; employment rates of native-born workers were not significantly affected. During the 1980s, immigration affected negatively and exclusively the employment rates of less-educated workers, and the net migration of workers from other states continued to be lower than in decades past. Earnings of native-born workers were not affected by immigration during that decade.

Several potential factors may explain why different labor market outcomes were affected by immigration in the 1970s than in the 1980s. One potential factor is that the growth in the demand for labor was much higher (30 percent higher) during the first decade than the second, resulting in greater job opportunities that induced people to enter the labor market at a higher rate than they would otherwise have done. In this high employment growth context, immigration may have not so much increased competition for jobs as exercised a brake on growth of wages.

Among workers of different racial/ethnic groups, African Americans were more affected by immigration than other racial/ethnic groups. Their earnings were disproportionately affected by immigration during the 1970s, as were their employment rates. The latter effect continued into the 1980s while the earnings effect did not. Several factors potentially explain this disproportionate effect of immigration on African Americans. "Network hiring" for low-skill jobs has historically favored non-Hispanic whites over African Americans and is increasingly favoring Hispanics because of the share increase in the relative numbers of the second group. Employer preference and/or discrimination may be another factor, as are the higher proportion of African Americans covered by minimum wage laws and union membership. As a result of these institutionally imposed constraints on changes in African Americans' earnings relative to those of other groups, African Americans' employment rates would be expected to be disproportionately affected by immigration, as they indeed were estimated to be.

Despite the disproportionate effect of immigration on the earnings of African Americans, other potential factors, including affirmative action, have more than compensated for the negative immigration effects so that African Americans' earnings disparities with non-Hispanic whites have declined over time for both men and women high school dropouts and high school graduates. At the same time, the gaps in employment rates between African Americans and other groups have increased, although only in part because of immigration.

Immigration has also affected native-born women differently from native-born men, at least during the 1970s. During that decade, native-born women's earnings were more affected by immigration than those of native-born men, while their employment rates were less affected than those of men. During the 1980s, both men and women were estimated to be similarly affected by immigration.

While we are confident about the negative direction of immigration effects on the job opportunities and/or earnings of native-born high school dropouts and high school graduates in California during the period studied, we are less confident about the magnitude of these effects. One thing is certain, however: The decline in job opportunities for native-born workers does not amount to one job for each job filled by an immigrant. Our findings suggest that the magnitude of this trade-off is greater during times of lower employment growth than during times of high employment growth. We estimated that this trade-off ranged from four to six jobs lost to a native high school dropout or high school graduate for every 100 jobs filled by immigrants in California. The effect on earnings, however, ranged from nil up to $4,000 annually, depending on level of education and race/ethnicity, and affected from 30 to 40 percent of California workers, mostly high school dropouts and high school graduates. The earnings of immigrants themselves have also been negatively affected by successively more immigrants with low levels of education.

Chapter Ten

EFFECTS ON THE PUBLIC SECTOR: THE NEW CHALLENGE

Following World War II, and spurred by rapid economic growth and a willing public, California eventually built a physical and education infrastructure second to none. By the 1960s, the state's education system, particularly its higher education component, was reputed to be one of the best in the world. And its water, road, and highway systems were some of the most extensive and modern. This emphasis on building an extensive public infrastructure was reflected in the higher share of California's labor force working in the public sector than that in the rest of the nation: 5.2 versus 3.9 percent in 1960.

However, California's taxpayers' willingness to increasingly tax themselves to finance the continuing expansion of an extensive network of public services eventually turned to reluctance. In 1978, they overwhelmingly approved a popular initiative, Proposition 13, which rolled back property tax levels and limited the rate at which they could increase in the future.[1] Several subsequent popular initiatives followed, with the overall effect of curtailing growth in public revenues and limiting the state legislature's flexibility for allocating them.[2] By 1990, the state's share of its labor force working in the public sector had declined by one percentage point to 4.3 percent, while that in the rest of the nation had increased by the same amount to 4.7 percent.

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[1] Prior to the passage of Proposition 13 in 1978, California ranked 4th among states in the share of personal income spent on state and local taxes. The state subsequently fell to 24th position. Although the state's rank has varied somewhat since then, it remains in the middle of the national distribution (California Statistical Abstract, 1995).

[2] Proposition 4 limits the amount by which state government expenditures can increase. Proposition 99 earmarks 40 percent of the state's general revenues for K–14 education. A description of these and other factors that have affected the state's fiscal picture can be found in Winkler and Chapman, 1990; Chapman, 1991; and Kirlin, 1989. Total state tax revenues as a percentage of personal income peaked in 1980 and has

What had become a chronic structural imbalance between increasingly curtailed public revenues[3] and growing demand for public services turned into a fiscal crisis in 1990, when the state entered into its deepest and longest recession in several generations. Severely reduced state revenues, and hence the ability of the state to maintain services at previous levels, were the immediate effect of the recession. In turn, cutting the level of services to all became the only option available to close the state budget deficit in post-1990 California. The alternative, an increase in taxes, was not a politically feasible option; taxes were already considered to be excessively high in California relative to other states. And whereas the federal government had provided countercyclical aid to state and local governments in previous recessions––in the form of public works or public service employment programs—growing concerns about the federal deficit itself closed that option as well.

In this context, the perceived high costs of providing services to illegal immigrants, and immigrants more generally, became a target for closing the state budget deficit by seeking—through both legislative and legal actions—to have the federal government cover the full costs of providing services to illegal immigrants. Enforcement of immigration laws is the sole responsibility of the federal government. Hence, state and local costs incurred by a failure of the federal government to prevent illegal immigration are arguably also a responsibility of the federal government (Vernez, 1992; Skerry, 1995).[4]

In the face of federal inaction on the question of illegal immigration, the denial of services to illegal immigrants came to be seen as another way to help close California's budget deficit. An initiative, included in the 1995 ballot, and eventually supported by the governor of California, sought to do just that. Proposition 187, as it became

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declined since, as has the state's ranking in the share of its relative income spent on state taxes (California Statistical Abstract, 1990).

[3] See Winkler and Chapman, 1990.

[4] See Vernez (1992) for an argument supporting this proposition, and Skerry (1995) for an opposite argument.

known, sought to deny education, health, and other public services to illegal immigrants—both adults and children. It was overwhelmingly approved by California voters. In early 1996, a federal court ruled that major provisions of Proposition 187 usurped the prerogative of the federal government to formulate immigration policy and these were declared unconstitutional. The proposition is now working its way through the appellate courts.[5]

In this new context, two basic questions dominated the post-1990 debate over the effects of immigration on the public sector:

- Do immigrants' contributions to public revenues cover the costs of the public, federal, state, and local services they receive?
- What is the net *budgetary* cost (or benefit) to the state and its localities of providing public services to immigrants, and to illegal immigrants in particular?

This chapter begins with a brief review of recent studies that have addressed these questions in California. Having found that lack of systematic data on the pattern of use of public services over time by immigrants of different status limits the usefulness of these studies, we then endeavor to present new information on this question of critical importance to the state. In the last section, we discuss the implications of our findings for future demand on California's public services.

FISCAL EFFECTS OF IMMIGRANTS IN CALIFORNIA

Several recent studies have sought to estimate the net public costs of immigrants on the State of California (Romero, Chang, and Parker, 1994; Clark et al., 1994) and its counties (ISD, 1992; Clark and Passel, 1993; and Parker and Rea, 1993). These studies were reviewed and assessed along with other state and national studies in a companion report (Vernez and McCarthy, 1996). Hence, only their key findings and limitations are summarized below.

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[5] In 1996, Congress passed, and the president signed into federal law, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, which denies immigrants eligibility for a broad array of federal and state social benefits, hence allowing implementation of most of Proposition 187's provisions, except the denial of primary and secondary education to undocumented children.

No Agreement on Net Fiscal Effects

Table 10.1 displays the per-capita costs and revenues[6] of the various California studies for immigrants as a whole and for subgroups of immigrants, including illegal immigrants.

Comparison among these findings should be made carefully because they group immigrants in different ways and because they vary in the relative proportion of service costs and public revenues included. Even where groupings of immigrants are similar, the estimates display large differences. At the county level and among illegal immigrants, ISD estimated per-capita yearly costs to Los Angeles County of $440, compared with $1,254 in the San Diego County study.[7] The latter study's inclusion of costs for some state-provided services—e.g., health, criminal justice, welfare—explains most of this difference. Both studies estimate a fiscal "deficit" for illegal immigrants, but the estimate for Los Angeles County is 2.5 times larger.

Similarly, large differences are apparent on the revenue side. Clark and Passel, for example, estimate yearly revenues per capita ($123) that are twice as high as those made by ISD ($60)—a difference that is attributable mainly to different estimates of immigrant incomes (Table 10.1).

These large differences in estimated aggregate costs and revenues mask even greater disparities in estimates for individual services and revenue sources. For instance, ISD (1992) estimated the County of Los Angeles spent $153 per illegal immigrant for law enforcement and corrections compared with San Diego's estimate of $689 (see Table C.1 in Appendix C). On the revenue side, the San Diego study assumes that property owners pay the entire property tax while immigrants pay none. Other studies make different assumptions (see Table C.2 in Appendix C).

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[6] We compare costs and revenues per capita to control for differences in aggregate costs or revenues due simply to significantly different estimates of the size of the immigrant population across studies. For instance, Romero, Chang, and Parker (1994) estimated that 1.7 million illegal immigrants resided in California compared with 1.4 million for Clark et al. (1994).

[7] Differences in costs per capita may also be caused by differences in levels of services provided across jurisdictions. Such variations, however, are minimized when comparing local jurisdictions within the same state. Also, differences in public outlays would also be reflected in differences in public revenues raised to finance those outlays, thus minimizing their effects on net fiscal costs (or benefits).

The two state studies differ significantly in the range of services and of revenues they include. And they also differ broadly in estimates for individual services and revenue sources. For instance, Romero, Chang and Parker (1994) estimated that the State of California spent $229 per illegal immigrant for annual Medicaid emergency services compared with Clark et al. (1994), who estimated $115 (Table C.1, Appendix C). On the revenue side, the latter estimated that $324 per illegal immigrant was collected by the state in sales tax compared with $239 estimated by Romero et al.

In spite of such differences, the state and county studies generally agree on three points. First, they estimate that neither native-born residents nor immigrants pay their way at the state and local levels. This is not surprising since those studies include a fuller range of outlays than revenues, excluding for instance, transfer payments from higher levels of government. The state and the counties have to balance their budgets on an annual basis and generally do. Hence, finding a "deficit" for all residents of a jurisdiction is simply an "accounting artifact."

Second, where estimates are made separately for immigrants and native-born residents, the studies agree that the "deficit" for immigrants is larger than the "deficit" for natives. At the county level, the deficit for all immigrants ranged from $230 to $293 compared with $146 for natives. And third, these and other studies (Vernez and McCarthy, 1996) are generally consistent in finding that the deficit for illegal immigrants is larger than that for amnestied immigrants and legal immigrants. At the state level, the estimated deficit ranges

Table 10.1

California Studies of Immigration Costs, Per-Capita Public Annual Costs and Revenues, by Immigration Status

Immigrant Status	County									State					
	Los Angeles County[a] ISD, 1992			Los Angeles County Clark and Passel, 1993			San Diego County, Parker and Rea, 1993			Clark et al., 1995			Romero, Chang and Parker, 1994		
	Cost	Revenue	Ratio	Cost	Revenue	Ratio	Cost	Revenue	Ratio	Cost	Revenue	Ratio	Cost	Revenue	Ratio
Immigrants															
Illegal	440	38[b]	11.5				1,254	271	4.6	1,264[e]	508	2.5	1,990	429	4.6
Citizen children of illegal	366						127[c]						521		
Amnestied	269	65	4.1												
Legal, 1980–1992	344	88	3.9												
All above	353[d]	60[d]	5.8	353[d]	123[d]	2.9									
Native-born population	328	182	1.8	328	181	1.8									

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Table 10.1—continued

	County									State					
	Los Angeles County[a] ISD, 1992			Los Angeles County Clark and Passel, 1993			San Diego County, Parker and Rea, 1993			Clark et al., 1995			Romero, Chang and Parker, 1994		
	Cost	Revenue	Ratio	Cost	Revenue	Ratio	Cost	Revenue	Ratio	Cost	Revenue	Ratio	Cost	Revenue	Ratio
Percentage of total service costs or revenues included in study[f]	100	30		100	30		100			67	41		100	77	

SOURCE: See list of references for full citations of studies.

NOTE: A blank means the information is not available or not applicable.

[a] Excludes school expenditures because they are covered by a special district.

[b] Includes citizen children of illegal immigrants.

[c] Cost of Aid to Families with Dependent Children (AFDC) to citizen children of illegal immigrants.

[d] Includes all who entered after 1980, including amnestied and undocumented immigrants.

[e] Includes costs of incarceration, education (excluding native-born children of illegal immigrants), and Medicaid emergency medical care.

[f] Our approximations.

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from $756 to $1,561 per illegal immigrant. At the county level, the estimated deficit ranges from $402 to $983.[8]

These two latter findings, however, reflect in large measure the higher average income, and hence revenues, estimated for native-born residents and legal immigrants.

While these studies are a first step toward understanding the fiscal implications of immigration, they do not provide a reliable estimate of the net fiscal costs of immigrants to the state or its counties. They share a number of data and conceptual deficiencies that will need to be overcome before more reliable estimates can be developed. These and other studies[9]

- disagree on the definition of who is an immigrant
- take a short-term rather than a lifetime approach in measuring costs and benefits
- are inconsistent and incomplete in coverage of costs and revenues and on how they are accounted for
- lack direct evidence about the number of immigrants by immigration status and their use of services and tax payment, and other revenues.[10]

No Agreement on Who Is an Immigrant

All past studies agree that foreign-born noncitizens should be classified as immigrants. But they disagree about how to treat naturalized immigrants (those who have become citizens) and the native-born children of illegal and legal immigrants. Naturalized immigrants and native-born children of immigrants are, by U.S. law, citizens, and from a legal perspective they are not "immigrants." However, had they or their parents not immigrated to the United States, they would not be in the country in the first place: Thus, from a pragmatic perspective, it is arguable that they should be counted with immigrants for cost accounting purposes.

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[8] In their earlier studies, Mueller and Espenshade (1985) and McCarthy and Valdez (1986) estimated a fiscal deficit for Mexican immigrants in California. The first estimated a state deficit of $1,779 per Mexican immigrant household in 1980 and a county deficit of $446 also in 1980. The second estimated a state fiscal deficit of $989 to $1,032 per Mexican immigrant in 1980. In a recent study, published at the time this book was in production, the National Research Council estimated a fiscal deficit of $3,463 (1996 dollars) per immigrant household or about $737 per immigrant (National Research Council, 1997).

[9] Other studies at the national level include Huddle (1993 and 1994), Passel (1994), and Center for Immigration Studies (1994), and King (1994) at the state level.

[10] A recent review of the studies of the fiscal effects of illegal immigration by the National Research Council arrived at similar conclusions (Edmonston and Lee, 1996).

The choices made with regard to this question significantly affect the estimated costs of immigration. Romero, Chang, and Parker (1994) estimate that inclusion of the state's costs of educating the citizen children of illegal parents adds in excess of 25 percent to the public costs of illegal immigration. At the county level, ISD (1992) estimated a 90 percent increase in costs to the County of Los Angeles.

A study's choice of categories for grouping immigrants is also important not only to determine the fiscal effect of a particular group of immigrants but also for the policy implications that can be drawn from these estimates. Some studies have focused on one or more groups of immigrants: illegals, those who received amnesty, and other immigrants. Other studies focused only on immigrants as an aggregate category. Since most estimates rely on assumptions about average incomes and service usage within the subgroups of immigrants they identify (see below), these estimates depend directly upon which groupings are used. Just as important, forecasts about the future that are drawn from these estimates hinge on how immigrants are categorized. Typically, the implicit assumption built into these studies is that if a particular group currently produces a net public "deficit," then future immigration by that group either ought to be eliminated or reduced.

In fact, such broad groupings fail to capture the diversity of immigrants—as we have documented in previous chapters—or to provide an adequate basis for policy, because they do not mirror the criteria used to admit legal immigrants. More appropriate categories would distinguish immigrants based on the determinants currently used to admit permanent immigrants, such as refugee status, family reunification, employment, temporary protective status (TPS), or other more specific characteristics that would provide a better determinant of whether immigrants are likely to be high or low consumers of public services or revenue generators. As will be shown in the next section, there are significant differences in service use between refugees and other immigrants and between immigrants from different countries of origin.

Annual Lifetime Contributions Versus Costs

All extensive studies of public costs of immigration have focused on the net fiscal costs of immigration in a given year. This is an appropriate perspective if the concern is with balancing government budgets from one year to the next. However, an immigrant's use of services and contributions to revenues are likely to vary over time as the immigrant becomes more familiar with U.S. society and labor markets. Indeed, the services provided to immigrants, especially education and health services, can appropriately be regarded as investments made today in expectation of a return to be received tomorrow. From this perspective, the appropriate question is not whether the "net costs" of providing services to immigrants yield a "surplus" or "deficit" on an annual basis but whether, over the duration of the immigrant's residence in the United States, the state reaps a net cost or benefit. None of the studies reviewed considered this issue.

Incomplete Coverage of Costs and Revenues

A starting premise of any fiscal cost accounting framework is that all public services should be included or a justification provided for excluding a particular service. This has not, however, been the common practice: The range of public outlays has varied from a low of 67 percent to a high of 100 percent in the California studies reviewed (Table 10.1). While most studies include services provided directly to individuals (e.g., education, nutrition, and social services) not all studies include such major categories of expenditures as general government and administrative expenditures, police and fire protection, interest on public debt, and capital expenditures needed to accommodate a growing population. At the federal level, expenditures such as national defense, research and development, and highway construction should be included.

Such exclusion may be justified on one of two grounds—neither of which fully holds. Either immigrants do not derive any benefit from these services or the marginal costs of providing these services to immigrants is zero. The former assumption is questionable at best, and the latter assumption—even if closer to reality—implicitly suggests that native-born residents should subsidize the provision of these services to immigrants. At any rate, how to value the benefits of such services to immigrants is the object of continuing debate.

Social insurance programs (e.g., Social Security, unemployment insurance, and workers' compensation) present another source of accounting disagreement. The implicit argument for their exclusion is that these programs are self-funded. But these programs often have a redistributive function that provides disproportionate benefits to low-income immigrants and native-born residents. In addition, the revenues from the special funds are often treated as general revenues.

Even when the decision is made to include social insurance expenditures in the cost estimates, there is still a decision of whether those costs should be allocated on a current, intergenerational, or even a lifetime basis.[11] Because most immigrants are young and thus will not be eligible to receive social insurance benefits for several years, the cost allocation approach that is used can result in as much as a tenfold difference in the estimates of these costs.

Just as all services should be included on the cost side of the ledger, so should all revenues be included on the benefit side. But once again, this has not been the common practice, and the public revenues included in these studies can range from a low of 30 percent of total public revenues to a high of 71 percent. Revenues collected from individuals (e.g., personal income, property, and sales taxes) have generally been included. But revenues from businesses, banks, and corporations have typically been excluded. Exclusion of corporate and commercial property taxes is especially problematic when the full costs of the local services provided to business are attributed to consumers, including immigrants, as has typically been the case. It leads to an overestimate of service costs attributed to immigrants or, alternatively, to an underestimate of the revenues deemed attributable to them.

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[11] For Social Security, for instance, one approach is to attribute to each immigrant the estimated value of payment actually made to them at a given point in time. Since most immigrants are not yet of retirement age, the benefits so estimated for a specific group of immigrants are relatively low. Another approach is to impute to each immigrant the ratio of total payment made to immigrants divided by the total number of immigrants. In this latter approach, new immigrants are "held liable" for supporting the pensions of previous waves of immigrants. A third approach would use the lifetime actuarial method to estimate the costs of social insurance.

No Direct Information About Immigrants

Accurate, reliable, and comparable estimates of the net fiscal costs of immigration require several different types of information:

- An accurate count of immigrants by immigration status and other relevant socioeconomic characteristics.
- Reliable information on immigrants' *actual* use of all relevant services and the *actual* public costs of providing those services to immigrants and members of their families, differentiated by immigration status.
- Reliable information on which revenue sources immigrants *actually* contributed to and the *actual* amount of their contributions, again differentiated by immigration status.

Reliable and comprehensive data on all of these critical parameters are not currently available. In their absence, the studies reviewed have made differing assumptions about the number of immigrants, their service usage, and their contributions to public revenues. Inaccurate assumptions can affect not only the magnitude of the estimates but also the direction of the net cost estimates.

Most studies, for example, assumed that immigrants' use of services was proportional to their numbers, regardless of their socioeconomic and immigration status. No differences were made between the various groups of immigrants either by country of origin or, even more important, by socio-economic characteristics. Another common assumption made in these studies was that the incidence of tax payments and payroll deduction was uniformly high across income levels and immigration status.

In the remainder of this chapter, we present new evidence that challenges these assumptions and begins to provide a more thorough understanding of (1) the variations in service use and incidence of tax payments between different groups of immigrants and (2) the variations in service use between immigrants and the native-born population.

ILLEGAL IMMIGRANTS: SERVICE USE AND TAX CONTRIBUTIONS

The fiscal costs to the state and its counties of illegal immigration have been the object of much controversy. On the one hand, illegal immigrants are not eligible for certain federal cash and medical assistance programs including Aid to Families with Dependent Children (AFDC), food stamps, Supplemental Security Income (SSI) and nonemergency medical assistance. On the other hand, they are eligible for education services and nutritional and other programs, as well as for state and local public health services. And their children born in the United States have the same access to all services as the native-born children of legal immigrant and native-born parents. How do illegal immigrants make use of these services? Does their use of services differ from those of other immigrants? And is the extent to which they pay taxes different from those of other immigrants?

RAND addressed these questions in two recent surveys of immigrants in Los Angeles. The first survey focused on a broad range of services used by Salvadoran and Filipino immigrants, two increasingly important groups of immigrants. Salvadoran immigrants are the second largest group of Hispanic immigrants after Mexicans. Typically, they have initially entered the state illegally. Filipinos are the largest group of immigrants from Asia. Most entered the country legally (DaVanzo et al., 1994). The second survey focused on the use of health services by young Hispanic children of illegal, legal, and native-born parents (Halfon et al., 1997).

Use of Services

Tables 10.2 and 10.3 show how the use of public welfare, nutrition and health services, education, libraries, public transport, and other services currently varies among illegal, temporary, and legal residents.[12] The following observations about differentials in service use by immigration status can be made.

Families with illegal immigrants are about as likely to use public services at least once over a one-year period as temporary and legal immigrants. For instance, one out of three illegal Salvadoran immigrants had used the Women, Infants and Children (WIC) program and had used a public hospital, compared with one out of five legal immigrants (Table 10.2). The use of public hospitals is even greater for U.S.-born children of illegal immigrants: One out of two had used a public hospital since birth, compared with one in three children of legal resident immigrants and one out of six children of U.S. citizens.

The reason for the greater use by illegal immigrants of public rather than private providers of health services is to be found in differences in their pattern of health coverage: Illegal immigrants are less likely to be covered by private insurance than are legal immigrants and U.S. citizens.

Although illegal immigrants themselves are not eligible for AFDC, food stamps, and Medicaid (except for emergency services), they benefit *indirectly* from these programs. More than one out of six and one out of five illegal immigrants resided in families who were receiving AFDC and food stamps, respectively. They benefit from these transfer programs through their eligible U.S.-born children or through their legal relatives. Of all immigrant households that received AFDC benefits in 1993, two out of three contained a U.S.-born child (U.S. General Accounting Office, 1995). And one out of two Hispanic families headed by an illegal immigrant had at least one of their children age 12 to 36 months covered by MediCal since birth, either continuously or off and on.

By and large, school attendance in the United States by adult immigrants is relatively low. Salvadoran permanent immigrants and Filipino naturalized citizens had the highest incidence of school attendance; one out of three reported having attended some school in the

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[12] The pattern of service use displayed in these tables precedes the passage by Congress of the Personal Responsibility and Work Opportunity Act of 1996, which will limit access of some legal immigrants to certain cash and medical assistance programs. These new eligibility provisions will be implemented in 1997 and 1998, and their effects on service use remain to be seen.

United States. Attendance in school by all other adult immigrants in that study did not exceed one out of five. Undocumented adult immigrants were as likely as persons of other immigration status to have attended school. But undocumented immigrants were half as likely as other immigrants to have received vocational training. In addition, nearly half of the undocumented Salvadoran immigrants at one time attended English as a second language (ESL) classes, whereas more than four out of five permanent Salvadoran immigrants had done so by the time of their interview. In contrast, less than one in ten Filipino immigrants attended English as a Second Language (ESL) classes, reflecting differentials in English proficiency at time of entry between the two groups of immigrants.

DaVanzo et al. (1994) and Halfon et al. (1997) assessed the extent to which immigration status, family income, health coverage, family composition, employment, and other factors might affect use of services. The results of their multivariate analyses are consistent in suggesting that the use of public services is generally not affected by immigration status, per se, including illegal status. The main factors affecting the use of welfare and health services are income and number of children, particularly children age five or under. Lack of private insurance coverage, itself dependent on employment patterns, is also associated with use of public providers for health services. In turn, frequency of use is associated with type of health coverage, with those covered by private insurance making more frequent visits in a year than those covered by MediCal.

In addition, the use of special purpose public services, such as Supplemental Security Income, legal services, libraries, public transport, and recreation, is affected by factors influencing the need for the service in the first place, such as age, disability, income, number of children, English proficiency, or desire to change immigration status.

Payroll Deductions and Tax Filings

In contrast to service use, the 1991 RAND survey of Salvadoran and Filipino immigrants suggests that the incidence of payroll deduc-

Table 10.2

Use of Services, by Immigration Status, of Salvadoran and Filipino Immigrants, and by Type of Program, 1991 (in percentage)

	Salvadoran Immigrants					Filipino Immigrants		
Type of Program	Undocumented	TPS[a]	Temporary Visa	Permanent Resident	All	Permanent Resident	Citizen	All
Transfer programs								
AFDC	14	10	13	6	9	2	1	1
Food stamps	22	17	18	14	17	4	1	2
WIC (supplemental food program, Dept. of Agriculture)	33	28	34	20	26	6	0	2
Unemployment compensation	8	8	8	10	9	13	8	10
Workers' compensation	4	6	0	8	6	3	3	3
Health services (services)								
Public hospital	30	24	29	21	25	10	10	10
County, free, or family clinics	52	50	53	35	45	16	10	12
Prenatal clinics	17	20	16	14	16	6	4	4
Private doctor or clinic	31	48	39	51	45	52	62	58
Health insurance coverage								
Any health insurance	39	40	37	44	41	87	90	88
Government program	35	28	32	22	28	26	26	26
Private insurance	3	7	11	15	10	56	58	57
Health maintenance organization	7	10	3	18	12	40	53	49

Table 10.2—continued

	Salvadoran Immigrants					Filipino Immigrants		
Type of Program	Undocumented	TPS[a]	Temporary Visa	Permanent Resident	All	Permanent Resident	Citizen	All
Education								
Ever attended school in U.S.	21	20	16	36	26	12	32	24
Adult education classes	12	13	13	19	15	0	4	3
Secondary schools	8	6	3	12	8	5	6	5
Some college or more	1	0	0	3	1	7	22	16
Ever attended vocational training	7	6	16	13	10	21	34	28
Ever attended ESL[b] classes	45	57	55	82	64	6	9	8
Other services								
Public transport	70	61	66	60	63	25	28	26
Recreation	52	46	37	58	52	62	71	66
Libraries	21	22	32	32	28	47	71	62
Legal services	14	24	34	11	17	4	1	2
Average annual income (dollars)	10,250	10,800	11,250	13,000	11,485	37,630	50,000	47,325
Number of responses	92	89	38	161	380	89	176	265

SOURCE: DaVanzo et al., (1994), Tables 5.5-5.9, pp. 46–49.

NOTE: Respondents were asked whether they or anyone in their family had used a broad array of public and private services at least once over the past 12 months.

[a] Temporary Protective Status.

[b] English as a second language.

Table 10.3

Health Insurance Coverage and Health Service Utilization by Hispanic Children, Age 12–36 Months, by Immigration Status, 1992 (in percentage)

	Hispanic Parent		
Type of Service	Undocumented Immigrant	Legal Resident Immigrant	U.S. Citizen
Health provider used			
Public clinic	50	34	14
Health maintenance organization	9	8	16
Private doctor or clinic	36	51	61
Health insurance coverage[a]			
Continuous MediCal	44	40	50
Off and on MediCal	22	20	6
Private insurance	9	18	32
Service use			
Number of outpatient visits per year	7	6.8	10
Average income per capita	3,856	4,360	5,915

SOURCE: 1992 survey of 817 Hispanic families in South Central and East Los Angeles (Halfon et al., 1997).

NOTE: All data refer to children age 12–36 months born in the United States to parents of various immigration status. Information obtained from interviews with one of the parents.

[a] Coverage since childbirth.

tions and federal and state tax filings by immigrants is highly dependent on immigration status (Table 10.4).

About half of the illegal immigrants working at the time of the interview had payroll taxes deducted and less than 40 percent had filed a federal or state tax return. Permanent immigrants reported the highest incidence of payroll tax deductions and income tax filings. But even among those with the same immigration status, there were variations among immigrants. Salvadoran permanent residents were less likely than Filipino permanent residents to have payroll taxes deducted or to file federal tax returns, reflecting significant differences in occupational structure and incomes (DaVanzo et al., 1994, pp. 50–53).

Table 10.4

Federal Tax Filings and Payroll Deductions by Immigration Status of Salvadoran and Filipino Immigrants, 1991

Tax Filings and Payroll Deductions	Salvadoran Immigrants					Filipino Immigrants		
	Undocumented	TPS	Temporary Visa	Permanent Resident	All	Permanent Resident	Citizen	All
Filed federal taxes[a] (percent)	38	54	63	84	64	91	95	93
Payroll deductions[b] (percent)								
Any payroll	50	52	53	72	60	97	96	97
Federal taxes	46	51	37	72	57	94	96	95
State taxes	50	49	40	72	57	94	96	95
Social Security	46	51	44	70	57	91	91	91
Health insurance	9	6	12	25	15	47	62	52
Average annual income (dollars)	10,250	10,800	11,250	13,000	11,567	37,630	50,000	47,325

SOURCE: DaVanzo et al., 1994, p. 51.

[a] Percentage of all respondents.

[b] Percentage of respondents who worked the week preceding the interview.

These data support the view that the incidence of public revenues varies by immigration status, independently from income. Indeed, the U.S. Department of Labor (1996) also found that 90 percent or more of the legalized population under IRCA had their taxes deducted from payroll in 1992 regardless of level of income, with the exception of workers earnings less than $12,000 a year (80 percent).

Although these findings await empirical confirmation from a larger sample of immigrants from more countries of origin, they suggest two tentative conclusions. First, the use of public services has less to do with people's immigration status and more to do with relative income, family size, and other factors that determine needs. This is not surprising since our public service delivery system at all levels of government has a redistributive function. Even undocumented immigrants indirectly benefit from income-transfer and other programs through their eligible children or relatives. Additionally, and in contrast to the above, the filing of federal tax returns and the incidence of payroll tax deductions appear to be very much related to immigration status. In the RAND survey, undocumented immigrants were the least likely to file returns or to have their taxes deducted from payroll.

USE OF SERVICES BY IMMIGRANTS AND THE NATIVE-BORN POPULATION

Just as there are wide variations among immigrants in levels of education, family income, and other individual and family characteristics (Chapter Three), there also are wide variations in their use of public services. Also, their use of public services differs somewhat from that of the native-born population.

A brief methodological note is needed for appropriate interpretations of the analyses presented below. Our estimates of public service use by immigrants are based on data from the 1990 and 1991 national Survey of Income and Program Participation (SIPP). This sample survey contains information on the participation of more than 100,000 native- and foreign-born individuals in a broad range of public service programs. It also contains socio-economic information on families and households to which these individuals belong. The participation rate in a specific program is defined as the probability that a person of any age has benefited from that program in an average month. As elsewhere in this report, an immigrant is a person born outside the United States. Since children aged 15 or less were not asked where they were born, we attributed to them the nativity of their respective head of family. In other words, for this analysis a child is categorized as an immigrant if he or she lives in a family with a household head who is foreign born, regardless of whether that child was actually born in the United States or abroad.

We chose to report participation rates on an individual, rather than family or household, basis because the two latter measures are sensitive to variations in household size and clustering of programs participants in a few households or families. These latter measures tend to bias program participation rates of immigrants upwards. Bean, Van Hook, and Glick (1996) show that the welfare participation rates of immigrants relative to native-born residents differ depending on the choice of unit of observation. They show that when computed on a household basis—as is often the case—the welfare participation rate of "immigrant" households is higher than that of "native-born" households. However, when that rate is computed on an individual basis, native-born individuals have a higher welfare participation rate than immigrants. Part of the reason is that not all members in a household are immigrants and not all of them may participate in a specified public program.

In the absence of information about where a child of an immigrant family head was actually born, we treated that child as if he or she were born outside the United States. The rationale for this choice is that regardless of where they were born, these children have immigrant parents and hence would not use public services in the United States had their parents not immigrated. This choice is expected to result in a slightly higher participation rate for immigrants than would otherwise be the case.

Differences by Country of Origin

Table 10.5 displays the monthly participation rates of immigrants in a broad range of cash assistance, nutrition, health, housing, and social insurance programs by groupings of immigrants with significantly different socio-demographic characteristics, as was done in

Table 10.5

Immigrants' Monthly Participation Rates in Public Services by Country of Origin, in the Nation, 1990–1993

		Europe			Hispanics		Other		Refugees	
Type of Program	Age Group	UK/ Canada	Other Europe	Asia[a]	Mexico	Central America	Africa	Middle East	Vietnam	Former Soviet Union
Cash program										
AFDC	0–64	0.5	1.9	0.1	6.0	9.0	0.7	8.8	27.9	13.3
General Assistance	0–64	0.2	0.2	0.2	0.5	0.7	0.0	6.8	0.3	7.1
SSI	0–64	1.1	0.9	0.6	0.5	1.2	0.3	2.7	4.6	5.2
	65 or more	0.9	2.2	28.3	34.9	64.6		29.1	77.4	18.0
Nutrition										
Food stamps	All	1.3	1.3	1.1	14.7	13.8	1.7	14.1	29.8	31.7
WIC	0–44	0.6	0.6	0.1	3.0	1.6	0.7	0.4	2.3	2.0
School lunch	0–17	9.7	15.3	17.4	64.3	61.3	18.1	32.8	53.8	39.8
School breakfast	0–17	3.6	6.7	6.0	34.0	26.3	8.0	19.0	28.3	18.7
Health										
Medicaid	0–64	3.7	3.5	1.3	15.3	17.8	3.3	21.2	33.5	39.0
	65 or more	1.2	4.2	38.4	39.9	71.3	0.0	56.9	94.2	28.4
Medicare	0–64	2.4	3.6	0.9	0.8	0.5	0.1	0.9	0.7	2.2
	65 or more	99.5	98.5	71.7	88.6	82.2		64.8	42.4	88.1

Table 10.5—continued

		Europe			Hispanics		Other		Refugees	
	Age Group	UK/ Canada	Other Europe	Asia[a]	Mexico	Central America	Africa	Middle East	Vietnam	Former Soviet Union
Housing										
Public housing	All	0.3	0.3	0.5	3.5	1.8	0.1	0.0	4.7	.3
Low -rent assistance	All	1.1	1.1	1.2	2.8	5.4	0.2	1.1	4.7	7.6
Energy assistance	All	0.5	.9	0.1	1.2	1.8		1.3	2.6	1.3
Other										
Unemployment compensation	16–64	1.6	2.2	1.3	4.3	1.7	2.1	1.2	2.2	1.5
Social Security	0–64	6.2	6.6	1.7	2.1	2.6	0.0	0.9	0.4	3.2
	65 or more	93.1	94.2	63.2	70.0	60.5		52.2		81.6

SOURCE: U.S. Department of Commerce, *Survey of Income and Programs Participation*, 1990–1993.

NOTE: Participation rates are based on individual responses. Children of immigrants are counted as immigrants regardless of country of birth. The monthly rate is the average monthly participation rates over the period from 1990 to 1993. Blank means the sample size is too small to compute a rate.

[a] Includes China, Japan, Korea, and the Philippines.

Chapters Three and Four. Several observations can be made from this table.[13]

First, and as has by now been well documented by others as well (Fix and Passel, 1994; Borjas, Freeman, and Katz 1996), refugees have the highest use of services of any group of immigrants. About one-third of the refugees from Indochina and Vietnam depend on governmental cash assistance and health care. In addition, three in every four such elderly refugees receive benefits from the SSI program, and 90 percent rely on Medicaid for their health care. Participation rates among mostly refugees from the former Soviet Union are lower than for the less educated Vietnamese and Indochinese refugees, but they are typically higher than those for other immigrants.

This pattern may reflect both the difficulties that these relatively less-educated refugees have in finding jobs and their relatively high family size (Chapter Three). And unlike other immigrants, they are eligible for welfare and special assistance upon arrival. Note also that refugees are the most likely to benefit from some form of housing assistance, reflecting the priority given to housing refugees in various parts of the country.

Participation in public programs of all other groups of immigrants is significantly lower than that of refugees. Differences in patterns of services among them reflect their relative socio-economic conditions. Hence, the relatively low-income immigrants age 64 or less from Mexico and Central America have the highest rates of participation, ranging from 15 percent in the Medicaid and food stamps programs to 6 percent in the AFDC program. Also, two-thirds of these immigrants' children participated in the school lunch program, reflecting both low incomes and relatively large numbers of children in these immigrant families. Immigrants from the Middle East exhibit participation rates that are comparable to those of immigrants from Mexico and Central America.

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[13] To date, only two other studies have sought to analyze the participation of immigrants in a broad range of public programs, also using data from the Survey of Income and Program Participation. Our results are not directly comparable to those of these studies for the following reasons. Borjas and Hilton (1995) used the "household" for their unit of observation. They classified households as "immigrant" or "native born" according to the nativity of the head of household and counted a household as a program participant "if anyone in the household had received a specific service" regardless of the nativity of the actual service user. We expect this approach to overestimate service use by either group and bias immigrants' use of public services upwards. Sorensen and Blasberg (1996) used the same unit of observation as we did but did not include children age 14 or less in their analysis. We expect their results to underestimate the use of public services by immigrants, since immigrants are younger and have higher fertility rates than native-born residents.

In contrast, Europeans and Asians—who are not refugees—have relatively low rates of participation in public service programs. Their participation rates for non-elderly immigrants vary from a high of 4 percent (in Medicaid) to a low of 1 percent or less (in the AFDC program).

Table 10.5 also highlights the apparent "trade-off" occurring between the benefits received by the elderly from social insurance programs, such as Social Security and Medicare, and those they receive from the corresponding "safety net" programs, SSI and Medicaid. For the more recently arrived elderly from Asia, the Middle East, Mexico, and Central America, participation in Social Security benefits is relatively low and participation in SSI relatively high. An increasing number of these immigrants have come in their later years under the family reunification provisions and have not accumulated enough years in the labor market to qualify for Social Security benefits. Or they may have contributed too little to draw adequate benefits to sustain them in their old age. By contrast, Europeans, who arrived mostly prior to 1965, have a high level of participation in Social Security benefits and a low participation in SSI.

The relative pattern of participation by elderly immigrants in Medicare and Medicaid mirrors their pattern of use of Social Security and SSI benefits. For instance, the elderly from Asia—China, Japan, Korea, and the Philippines—have a low incidence of Medicare benefit receipts relative to other immigrants—72 percent—and have a high participation rate in Medicaid also relative to other immigrants—38 percent. The pattern is similar for Hispanics from Mexico and Central America.

The above clearly indicates that not only are there large variations in the use of public services by immigrants depending on immigration status and country of origin, but there are also wide variations across types of public services. The implication is that governmental entities, like the State of California and its counties, with a disproportionate share of immigrants who are relatively high users of public services—i.e., refugees and Mexican and Central American immigrants—will be disproportionately affected. Also, the low rate of participation in Social Security and Medicare programs by more recent immigrants can be expected to increase future demand on such "safety net" programs as SSI and Medicaid as these newer and increasingly larger immigrant groups age.

Differences Between Immigrants and the Native-Born Population

Are immigrants higher or lower users of public services than native-born individuals? In light of the above, the answer to this question clearly depends on which group of immigrants is compared with which group of natives.

Typically this question has been addressed by comparing the participation rates of the immigrant population, as a whole, to those of the native-born population, also as a whole. For this criterion, Figure 10.1 shows that there are no significant differences between immigrants—net of refugees[14]—and natives in their participation in a wide range of cash assistance, nutritional, health, and housing programs during 1990–1993. Once again, one significant exception is among the elderly. Elderly immigrants are significantly more likely to participate in the SSI and Medicaid programs than the native-born elderly. At the same time, they are significantly less likely to benefit from Social Security and Medicare programs. These programs differ not only in the range and level of benefits they confer, but most important for the state and its counties, they differ in how they are financed. The first are financed by general tax revenues, with a sizable state/county share, whereas the second are entirely financed by the federal government through payroll tax deductions from workers and employers.

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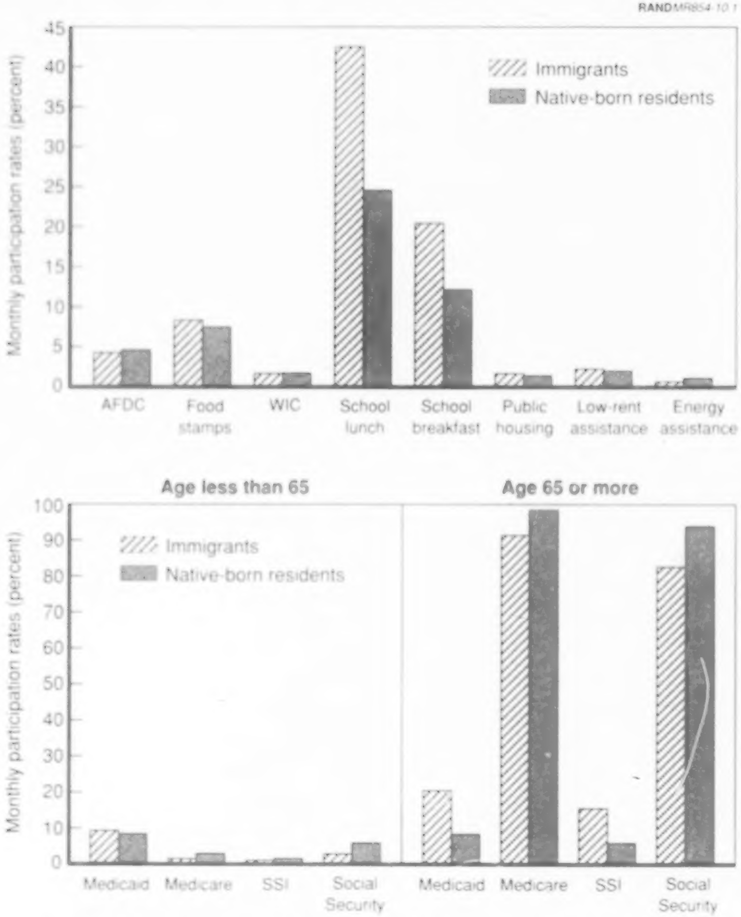
[14] We excluded refugees in computing participation rates for immigrants as a whole because refugees enter the country for humanitarian, often involuntary, reasons that differ from the voluntary—economic and family—reasons of other immigrants. Also, as a matter of policy, we extend public benefits and assistance to refugees that are not available to other immigrants and, in some cases, not even to natives.



SOURCE: U.S. Department of Commerce, *Survey of Income and Program Participation*, 1990–1993.

NOTE: Immigrants do not include refugees. See text for reasons for this exclusion.

Figure 10.1—Monthly Participation Rates in Selected Public Service Programs, by Immigration Status, in the Nation, 1990–1993

The other exceptions are the school lunch and breakfast programs, in which children of immigrants, either foreign or native born, are nearly twice as likely to participate than native-born children of native-born parents. This reflects the overall lower incomes and larger family size of immigrant families.

The answer to the above question differs, however, if one asks whether immigrants and native-born residents of similar socioeconomic characteristics differ in their patterns of use of public services. Table 10.6 compares the participation rates of immigrants and natives at an equivalent level of income. Since eligibility for most of the programs listed in the table is means-tested, it is not surprising that participation rates for both immigrants and natives drop significantly as family income increases. Participation in the food stamp program, for instance, decreases from more than 25 percent for individuals in families with incomes below $16,000 to less than 1 percent for those with incomes above $25,000. Eligibility for social insurance programs is not income tested, so that there is little variation across incomes in the participation in the Social Security and Medicare programs.

At low income levels—below $16,000—the rate of participation of immigrants in public service programs is actually lower than for native-born residents. For instance, 14 percent of immigrants in families with an income of less than $16,000 participated in the AFDC program, compared with 21 percent for natives. Similarly, 29 percent of non-elderly immigrants in such families participated in the Medicaid program, compared with 37 percent of natives similarly situated. There are only two exceptions to this pattern that are by now familiar. The first is a higher rate of participation by immigrants in school lunch and breakfast programs—42 versus 35 percent of native-born children for the school breakfast program. The second exception concerns elderly immigrants on SSI and Medicaid. Elderly immigrant are about twice as likely to participate in the SSI program as similarly situated natives, 21 versus 13 percent, and 50 percent more likely to participate in the Medicaid program—25 versus 17 percent. The reason is that a significantly lower proportion of elderly immigrants qualify for Social Security and Medicare benefits than do elderly natives.

Table 10.6

Monthly Participation Rates, by Family Income and Immigration Status, in the Nation, 1990–1993

	Age	Less Than $16,000		$16,000–24,999		$25,000 or More	
	Group	I	N	I	N	I	N
Cash program							
AFDC	0–64	14.3	21.5	4.5	2.9	0.3	0.6
General Assistance	0–64	1.9	2.8	0.8	0.4	0.1	0.1
SSI	0–64	2.4	5.4	0.6	1.4	0.5	0.3
	65 or more	20.7	12.7	4.1	2.3	15.5	1.3
Nutrition							
Food stamps	All	25.3	31.9	9.0	5.9	0.9	0.8
WIC	0–44	4.1	4.8	1.6	2.8	0.3	0.4
School lunch	0–17	69.6	66.4	65.8	44.4	21.7	8.7
School breakfast	0–17	42.3	35.4	26.3	18.6	8.9	4.2
Health							
Medicaid	0–64	29.2	37.3	10.8	8.2	1.9	1.6
	65 or more	25.3	17.1	8.2	3.3	20.4	2.1
Medicare	0–64	1.7	0.6	2.0	4.5	1.1	1.7
	65 or more	95.1	98.6	96.5	98.0	85.3	97.5
Housing							
Public housing	All	3.0	4.1	2.9	1.0	0.4	0.2
Low-rent assistance	All	6.0	7.0	2.3	1.1	0.5	0.3
Energy assistance	All	2.4	3.7	0.8	0.8	0.1	0.1
Other							
Unemployment compensation	16–64	3.1	2.7	3.2	2.8	2.0	1.8
Social Security	0-64	3.8	10.8	4.4	9.3	2.2	3.6
	65 or more	85.0	94.5	91.0	94.4	75.8	92.4

SOURCE: U.S. Department of Commerce, *Survey of Income and Program Participation*, 1990–1993.

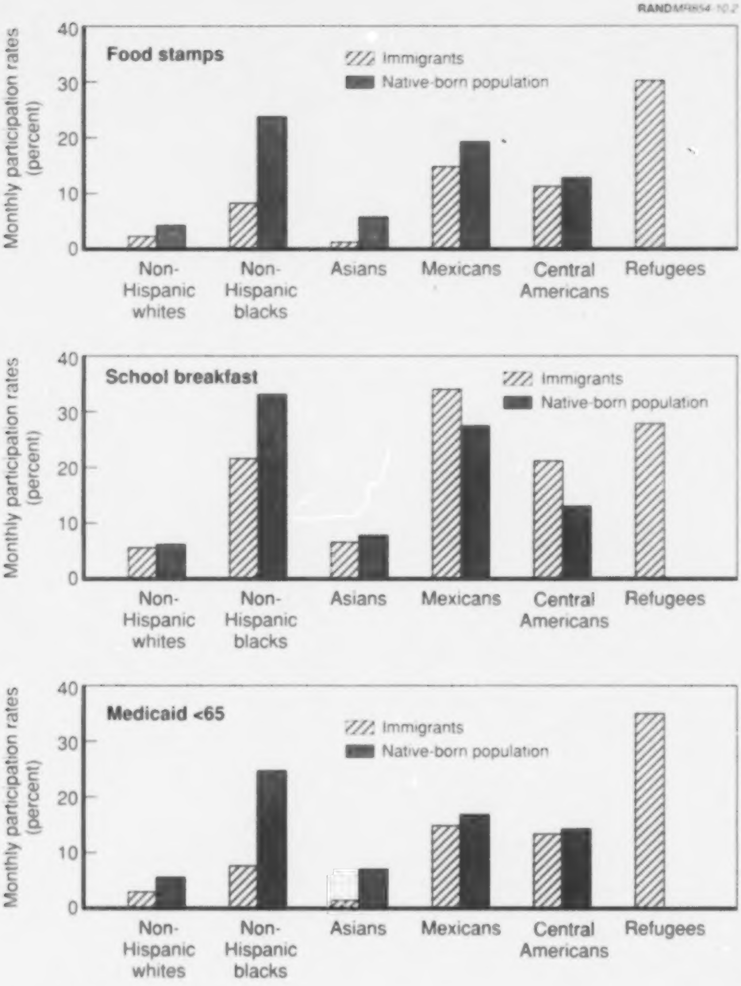
NOTE: Participation rates are based on individual responses. Children of immigrants are counted as immigrants regardless of country of birth. The monthly rate is the average monthly participation rates over the period from 1990 to 1993. I means immigrants and N means the native-born population.

The relationship between immigrants and native-born residents is reversed at income levels ranging from $16,000 to $25,000, with immigrants generally more likely to participate in public service programs of all kinds. For instance, non-elderly immigrants were two percentage points more likely to participate in the Medicaid programs than natives. Differentials are of the same order of magnitude across other welfare programs. One reason for this pattern is once again the presence of a larger number of children, especially children below the age of six, among immigrant than among native-born families.

At higher levels of income—above $25,000—participation in public service programs is equally low for both immigrants and native-born residents. But there are the same two exceptions, as already noted above, the school lunch and breakfast programs, and, for the elderly, the SSI and Medicaid programs. The first is related once again to large family size. And, for the second, although these elderly may live in families with some means, the resources of other members of their families, such as sons and daughters, cannot be fully counted as available to the elderly member of the family under most states' laws of relatives' responsibility.

Figure 10.2 shows participation rates in selected services for various racial/ethnic groups, further bringing home the fallacy of comparing the participation rates of various subgroups of immigrants having different socio-economic characteristics with those of native-born residents as a whole. Indeed, service participation of natives varies just as broadly among various groups of natives as it does among various groups of immigrants. The participation rate of natives in the food stamp program, for instance, varies from a high of 23 percent for African Americans to 19 percent for Mexican Americans and 5 and 4 percent for Asian Americans and non-Hispanic whites, respectively. The same patterns hold for participation of natives in the school breakfast, Medicaid, and other programs.

Within specific racial/ethnic groups, the participation rates of immigrants is generally lower than that of the native-born population. Non-elderly Asians, for instance, are significantly less likely than Asian Americans to participate in the food stamp—1 versus 5 percent—and Medicaid programs as well as other cash and nutritional



SOURCE: Appendix Table C.7.

NOTE: Immigrants do not include refugees. See text for reasons for this exclusion.

Figure 10.2—Monthly Participation Rates in Selected Public Programs, by Race/Ethnic Groups and Immigration Status, in the Nation, 1990–1993

programs. The reverse, however, is true for elderly Asians versus elderly Asian Americans: 38 versus 9 percent participation in the Medicaid program and 28 versus 7 percent in the SSI program.[15] The pattern is similar between immigrants from Mexico and Mexican Americans for most programs, except Medicaid in which there is no significant difference in participation rate—about 15 percent for both groups—and in the school breakfast and lunch programs in which Mexican immigrants are significantly more likely to participate than their native-born counterparts.

The reasons for these differences within racial/ethnic groups remain to be fully explored. One potential reason may be that nearly half of Mexican and Asian immigrants are recent immigrants who have entered the country since 1980 and hence may have been less likely to know about their eligibility for specific government programs.

Immigrants' Increased Use of Public Services over Time

One would expect that as an immigrant becomes familiar with the range of programs available to her or him, as well as about the rules guiding eligibility, she or he would be increasingly more likely to make use of them if eligible. Borjas and Hilton (1996) have found that the probability of welfare participation increases by about 4 percentage points over a five-year period, relative to changes experienced by native-born households. The same pattern was found in the case of legalized immigrants (U.S. Department of Labor, 1996) and also in the case of immigrants to Canada (Baker and Benjamin, 1996).

Table 10.7 also shows that generally, immigrants who have been here for less than five years have lower participation rates in public service programs than immigrants who have been here longer.

Significant increases in participation rate are shown after five years of residence in the country for the AFDC (25 percent increase), food stamp (63 percent), and public housing (144 percent) programs. Similarly, participation of elderly recipients in the SSI program increased by 70 percent after five years of residence.

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[15] See Table C.7, Appendix C.

Table 10.7

Monthly Participation Rates of Immigrants in Selected Programs, by Length of Stay, in the Nation, 1990–1993

Years Since Entry	AFDC	Food Stamps	School Lunch	Medicaid Age 0–64	Public Housing	SSI Age 65 or More
0–5	3.2	5.5	14.9	8.5	1.8	29.4
6–10	3.8	9.1	17.6	8.1	4.4	50.4

SOURCE: U.S. Department of Commerce, *Survey of Income and Program Participation*, 1990–1993.

NOTE: Participation rates are based on individual responses. Children of immigrants are counted as immigrants regardless of country of birth. The monthly rate is the average monthly participation rates over the period from 1990 to 1993.

The Special Case of Welfare

No other public entitlement has generated more controversy than welfare, the use of which by immigrants has been perceived to have increased over time. To address this question, we turn to 1970, 1980, and 1990 Census data for the State of California.

Certainly, use of welfare by immigrant adults has increased over time in California. Table 10.8 shows the increase in use of welfare (AFDC, SSI, and General Relief) by immigration status from 1970 to 1990 and separately for immigrants below the age of 65 and immigrants age 65 and above. The first are primarily eligible for AFDC, AFDC-U (unemployed fathers), and the General Relief programs (although some may benefit from the Disabled and Blind component of the SSI program) and the latter are primarily eligible for the SSI-Aged as well as the Disabled and Blind program. A few significant observations can be drawn from this table.[16]

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[16] Unlike the U.S. Department of Commerce's *Survey of Income and Program Participation*, which provides information on specific welfare programs, the Census provides only aggregate information for all cash assistance programs. Also, unlike the previous estimates, the rates shown in this subsection are specific to California. In the Census, only persons age 15 or above are identified individually as recipients of welfare programs. Hence, children are not included in these estimates, and thus the rates discussed here are not directly comparable to the rates shown in Tables 10.5 and 10.6.

Table 10.8

Percentage of Adults Reporting Receiving Public Assistance Income, by Gender, Age, and Immigration Status, in California, 1970–1990

	Men			Women		
	1970	1980	1990	1970	1980	1990
Adults age 64 or less						
Recent immigrants[a]	2.0	2.5	3.6	3.0	4.0	5.6
Earlier immigrants[b]	3.1	2.7	2.3	3.9	5.1	4.7
All immigrants	2.7	2.6	2.9	3.5	4.6	5.1
Native-born population	2.7	2.5	2.5	4.6	6.1	6.0
Adults age 65 or more						
Recent immigrants[a]	38.4	35.5	33.4	40.9	36.8	35.5
Earlier immigrants[b]	11.4	13.1	15.0	18.2	19.6	21.0
All immigrants	11.8	15.4	18.4	18.9	21.7	23.7
Native-born population	11.3	9.1	6.7	13.7	14.9	11.4

SOURCE: U.S. Department of Commerce, 1970, 1980 and 1990 .

NOTE: These rates are based on responses of individuals to the question of whether they personally had received income from a public assistance program. Also, the Census does not distinguish among the various public assistance programs. Generally adults age 64 or less would primarily benefit from the AFDC, AFDC-U, and General Relief programs, although some may also benefit from the SSI Disabled, Blind, and Aged Program. Adults age 65 or more would primarily benefit from the SSI program.

[a] Recent immigrants are immigrants who entered the country in the 10 years preceding the Census year.

[b] Earlier immigrants are immigrants who entered the country 10 years or more prior to the Census year.

First, it confirms that immigrants age 65 or more are much more likely to depend on public assistance than the native-born elderly.[17] This pattern of high use of SSI by immigrants goes back at least to 1970 when recent elderly immigrants,[18] both males and females, were already three times more likely to depend on SSI for income than natives and earlier immigrants. The demand on the SSI program due to immigration has grown steadily since then for three reasons. One, the dependency of recently arrived elderly immigrants on public assistance has remained consistently high, at more than 33 percent. Two, the dependency on public assistance of earlier immigrants has steadily increased over time. And three, the cohort size of both recent elderly and earlier immigrants to whom these higher rates apply has increased rapidly, and indeed more rapidly for elderly immigrant women than for elderly native-born women. By contrast, the dependency rates for elderly native-born men and women have declined steadily. By 1990, they were three times lower for native- than foreign-born men and two times lower for native- than foreign-born women. Because the earlier larger cohorts of immigrants who came in the 1970s are aging, we can expect these trends to become even more accentuated in the future, with immigrants already here and mostly naturalized leading the trends.

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[17] Hu (1997) also finds a higher rate of dependency on SSI for immigrants than for natives in the nation: 15.3 versus 8.6 percent in 1990. These rates are lower than those in California: 21.6 versus 9.5 percent.

[18] Elderly immigrants who reunited with their families within the previous decade.

A second observation that can be drawn from Table 10.8 is that dependency on public assistance of adults age 64 or less has increased over time for both recent and earlier immigrant women and for recent immigrant men. Earlier immigrant men, however, decreased their dependency on public assistance. On balance, the overall dependency rate of immigrant adults has steadily increased relative to native-born adults, most particularly for immigrant women.[19] Despite this trend, dependency rates of adult immigrant women have remained lower than those of native-born women.[20] And overall, the dependency rate of adult immigrants as a group remained slightly below that of natives: 4.0 versus 4.3 percent.

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[19] Borjas (1994) finds similar increasing patterns of welfare dependency in California over time in the aggregate and for specific cohorts of both recent and earlier immigrants. His welfare participation rates, based upon "whether anyone in the household has received welfare in the past year," are higher than those displayed in Table 10.7 for both natives and immigrants. His estimated rates remained stable for natives at 8.8 percent compared with an increase from 10.7 in 1970 to 12.6 in 1990 for immigrants. These discrepancies are due to differences in unit of observation: individuals versus households, and to Borjas' including the elderly as well as others in his calculations.

[20] This 1990 pattern is consistent with Bean, Van Hook, and Glick (1996) but contrasts with Borjas and Hilton (1995). There are various potential explanations for this apparent discrepancy. Foremost is that our rates are for individual adult men and women having received any public assistance income, while the rates in Borjas and Hilton are for households with anyone within the household having received income from AFDC only. Hence, native-born children of illegal parents receiving public assistance would not be counted in the first instance but would in the second. The California Department of Social Services reported that 118,000 children, or 13 percent of all children on AFDC, were citizen children of illegal immigrants in 1994 (California Department of Social Services, 1994).

The Special Case of Education

No other public service in California has been more impacted by immigration than public education, a service that is funded almost exclusively (in excess of 90 percent) by state and local tax revenues. Cumulative increases in immigration flows since the 1960s have translated into visible increases in actual enrollments in California's primary and secondary schools only since the mid-1980s (Figure 10.3). But they have been cumulatively building up over time since the early 1970s, because of both a steady flow of school-age immigrants and the increasingly larger number of native children born to immigrants. As noted in Chapter Three, immigrants are younger, more likely to be married, and have higher fertility rates than native-born residents, most particularly among immigrants from Mexico and Central America.

This cumulative buildup of the demand on California's education system can readily be seen in changes over time in the size of cohorts of school-age children (Table 10.9). The number of school-age children declined by 90,000 between 1970 and 1980 and then increased

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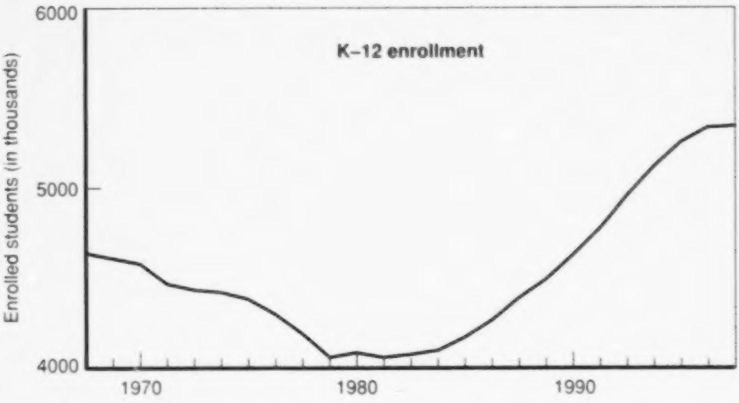


SOURCE: U.S. Department of Education, 1994, Table 43.

Figure 10.3

Table 10.9

Incremental Changes in the Number of School-Age Children, by Immigration Status and by Decade, in California, 1970–1990

	Immigrant Children		Native-Born Children		All	
Age Group	1970–1980	1980–1990	1970–1980	1980–1990	1970–1980	1980–1990
0–11	184,630	110,214	–390,150	1,149,216	–205,220	1,259,430
12–18	190,720	229,275	–76,700	–265,398	114,020	–36,123
Total	375,520	339,319	–466,850	883,818	–91,200	1,222,638

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970, 1980, and 1990; and Table C.6 in Appendix C.

NOTE: See Table C.8 in Appendix C for total number of school-age children, by age and immigration status.

by nearly 1.2 million between 1980 and 1990. The components of this change differ significantly between the two decades and illustrate dramatically the long-term cumulative effects that continuing flows of immigration are having on California's education system.

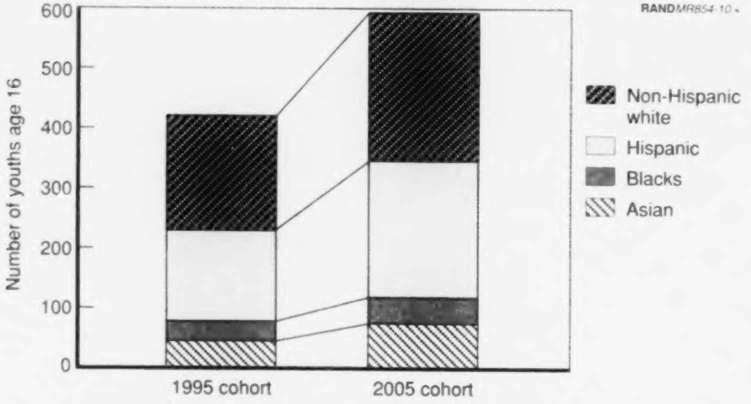
The 91,000 decline in number of school-age children during the 1970s was primarily due to a significantly larger—five times larger—decline in the number of native-born children (467,000) that was nearly fully compensated by the arrival of a large number of school-age immigrants (375,000).

In contrast, three-quarters of the nearly 1.2 million increase in the number of school-age children during the 1980s was due to an increase in the number of native-born children. We estimate that about 40 percent of these births were to immigrants, most particularly Hispanic immigrants. Indeed, half of the increase in the number of native-born children age 0 to 11 in the 1980s was accounted for by children born to Hispanic parents. The other one-fourth of the increase in the number of the school-age population was due to the continuing arrival of school-age immigrants.

Table 10.9 also shows that the 1980–1990 increase in the size of the school-age population was due to a disproportionate increase in the birth–11 age cohort, while the 12–18 age cohort has continued to decline slightly. The implication of this pattern is that the cumulative effects of past immigration had yet to be fully felt at the middle and high school levels and certainly not at the postsecondary level. This effect began to work its way into the middle school at the beginning of the 1990s, reaching the high school level in the mid-1990s, and will not impact the postsecondary education system until the latter part of this decade.

How the size and racial/ethnic composition of cohorts that are now entering the California school system will differ from previous cohorts can be gauged by comparing the characteristics of the cohort of children who were only one year old in 1990 with those who were the same age in 1980 (Figure 10.4). The first will enter junior high school in 2005, and the second entered junior high school in 1995. In aging the 1990 cohort, we generally assumed that the pattern of internal migration and international migration—lateral entries into the school system at various ages—experienced during the 1980s would also apply to this cohort.

Although the actual pattern of change may differ somewhat from our estimated pattern, two observations can be made from this simple exercise.



SOURCE: Appendix Table C.9.

Figure 10.4—Junior-High-School-Age Cohorts in California, by Racial/Ethnic Composition, 1995 and 2005

First, cohort sizes in the state's high schools can be expected to increase significantly—by 30 to 40 percent—over the next 10 years or so. The children who will cause this cohort size increase are already born and residing in California. Significant departure from this pattern would require either large net out-migration of these children to other states or significantly reduced immigration, both unlikely scenarios. The 1990–1995 recession did cause net out-migration from California to other states (see Chapter Nine), but this pattern is not expected to continue since the California economy has recovered and is expected to resume growth in excess of that of the nation. As for immigration, it has continued unabated over the recession, and, as of now, no significant changes in policy and, hence, in flows are expected. Note that even if immigration ceased tomorrow our estimated cohort size would still be 25 percent larger in year 2005 than it was in 1995.

Second, nearly two-thirds of the increase in cohort size is expected to be contributed by Asian (17 percent) and by Hispanic (45 percent) children who were born in the United States.[21] The remaining growth is accounted for by non-Hispanic white children (32 percent) and African American children (6 percent).

The net result of this pattern of change will be a continuing change in the racial/ethnic composition in California's schools and eventually in California's higher education system. We project that, in 2005, non-Hispanic whites will account for 40 percent of the junior-high-school-age cohort, a decline from 45 percent in 1995 and 52 percent in 1985. By 2005, there will be as many Hispanic high-school-age children as there are non-Hispanic whites.

CONCLUSIONS AND IMPLICATIONS

There are currently no comprehensive, and hence reliable, estimates of the net fiscal costs of illegal or legal immigration to the state of California and its counties. And such estimates cannot be developed without first resolving key conceptual accounting issues and collecting comprehensive information on the use of public services by immigrants over their lifetime.

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[21] In our projection to 2005, we have assumed a rate of immigration equal to the rate prevailing in the 1980s.

Past studies and new information on the participation of immigrants in public service programs presented in this chapter are, nevertheless, consistent in indicating the following.

Refugees, most particularly Vietnamese and Indochinese refugees, are exceptionally high users of public services—including cash, nutritional, health, housing, and other assistance programs. For instance, refugees are three times more likely to participate in the Medicaid programs than other immigrants and six times more likely to participate in the AFDC program. This is in part because they have relatively low levels of education and have a low participation rate in the labor force (Chapter Three). Also refugees, having been forced to leave their home country, are treated differently from voluntary immigrants. They are eligible for public services upon arrival and receive special assistance.

Among other immigrants, there are significant variations in their participation in public service programs. Illegal immigrants have higher participation rates in public service programs that they are eligible for than legal immigrants do. They also benefit indirectly from cash and nutritional programs through their eligible children or relatives.

In turn, immigrants from Mexico, Central America, and the Middle East have significantly higher participation rates in public service programs than non-refugee immigrants from Asia and Europe. Whereas about 15 percent of immigrants from the first group of countries participate in the food stamp program, only 1 percent of Asian and European immigrants do. Disparities between these various groups of immigrants hold across all major assistance programs, including AFDC, school breakfast and lunch, Medicaid, and housing programs.

These differentials in service use between immigrants from different countries of origin are primarily due to two factors: differences in family income and in family size, most particularly the presence of young children. They are the main factors that determine eligibility for means-tested programs such as AFDC, food stamps, Medicaid, school lunch and breakfast, and various housing programs.

The influence of these two factors also prevails when comparing participation rates in public service programs between immigrants and native-born residents. Participation rates in means-tested programs decline rapidly as family income increases, for both immigrants and natives. At low income levels, the participation rates of immigrants is actually lower than that of natives who are similarly situated. For instance, 14 percent of immigrants in families with an income of less than $16,000 participated in the AFDC program compared with 21 percent of natives with similar income. At family income levels above $25,000, both immigrants and natives have equally low participation rates.

Overall, we find the same variations in service participation among immigrants as we do among native-born residents. Both Hispanic-origin immigrants and Hispanic Americans have higher participation rates than Asian and European immigrants and Asian-American and natives of European descent. The one exception is African Americans. They have significantly higher participation rates than any other groups, immigrant and native born alike, in most public service programs.

Elderly immigrants present a special case with respect to their use of public services. Regardless of country of origin and level of income, they are much more likely to participate in the SSI and Medicaid programs than are native-born residents. As a whole, elderly immigrants are three times more likely to participate in the Medicaid and the SSI programs—20 versus 8 percent and 16 versus 6 percent, respectively for each program. Elderly Asian immigrants are just as likely to participate in these programs as elderly immigrants from Mexico and Central America. In turn, these elderly have much lower participation rates than elderly natives in the Social Security and Medicare programs for two reasons. First, an increasing number of elderly immigrants are entering the country to reunite with their children. Not having worked in the United States, these elderly immigrants do not qualify for Social Security and Medicare benefits. And, second, a significant portion of immigrants retiring from jobs in the United States may not have contributed to the Social Security system, and thus are ineligible for Social Security and Medicare benefits.

As significant as the impact of immigration on public service demand has been, no one public sector in California has been more affected than its education sector. Cumulative increases in immigrant children since 1960 were initially compensated for by a decline in the number of native-born children. Over time, however, these flows of immigrants' children have been building at the same time as the number of California-born children to young immigrant parents has also steadily increased. As a result, the number of children of school age has increased at the rate of about 120,000 a year since the early 1980s, beginning with the younger birth–11 age cohort. The full effect of this process has yet to be felt at the high school level and will not be felt in the higher education system until the beginning of the next century.

Two major implications can be derived from the above patterns of participation in public services by immigrants: The California public sector has been disproportionately impacted by immigration relative to that in the rest of the nation; and demand for public services in general, and for education in particular, will undoubtedly increase in the near future.

Disproportionate Effect on California Public Sector

In addition to the generally high concentration of immigrants in the state, the convergence of several other factors has caused the State of California and its local jurisdictions to be more impacted fiscally by immigration than the federal and other state governments. The state has the following to contend with:

- A disproportionate share of immigrants who are relatively high users of a broad range of public services, i.e., refugees and immigrants from Mexico and Central America.
- A higher proportion of its elderly population is foreign born, with concomitant higher rates of participation in the SSI and MediCal programs and lower rates of eligibility to receive Social Security and Medicare benefits.[22] The state contributes to the funding of

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[22] In 1990, 21 percent of California residents age 65 or more were immigrants, compared with 8 percent in the rest of the nation.

the first two programs, but the latter two are fully federally funded through payroll tax deductions from employees and employers.

- A higher proportion of young immigrants and young children who disproportionately use services that are primarily funded by the state and its local governments, e.g., education and public hospitals.
- A higher proportion of immigrants with relatively low levels of education, and hence, lower incomes. California also has a disproportionate share of illegal immigrants, who have lower incidence of payroll tax deductions and tax filings than other immigrants and native-born residents.

Because these factors operate in the same direction, they reinforce each other, leading to relatively higher use of public service programs by, and lower tax revenues from, immigrants in California than for those in the rest of the nation.

Future Demand for Public Services

The pattern of service use by immigrants analyzed in this chapter prevailed when immigrants had the same access to safety net programs as native-born residents, subject only to some limited restrictions. There is little doubt, however, that the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 will change this pattern, although in yet unknown ways. The new law, which will become fully effective in 1999, denies all federal, state, and local benefits to illegal immigrants, with a few exceptions, such as emergency medical assistance. Also, legal immigrants are now ineligible for food stamps and SSI until they obtain citizenship or have worked in this country at least 10 years. They are also denied access to other federal means-tested programs, including AFDC and Medicaid for the first five years of residence in the United States. However, state and local governments retain great discretion over immigrants' eligibility for Medicaid, social services, and Temporary Assistance for Needy Families (TANF), the successor to the AFDC program. Future demand for services, therefore, will in large part depend on decisions yet to be made in Sacramento and, eventually, by the counties.

Whatever decisions are eventually made with regard to the access by non-citizen immigrants, these decisions should be made considering the following long-term trends that have been set in motion by immigrants who are already residing in the state. Decline in future immigration flows may slow down these trends but will not significantly alter them.

First, the growth of the demand for primary and secondary education, and eventually higher education, which has been driven by immigration, will continue at a fast pace. The full effect of past flows of immigration on the education system has only recently begun to be felt at the primary and middle school levels. As increasingly larger cohorts of primary school students grow older, they will impact first the high schools and will begin to impact seriously the postsecondary education system by the latter part of this decade. The corollary of the cumulative effects of past immigration is that the continuing increase in demand for education will be driven by immigrants and children of immigrants already here. New immigration, if it continues, will add to that demand, but it will not be the main driver.

Second, a disproportionate share of new births will continue to be to immigrants because they are younger and have higher fertility rates than native-born residents do. The need for prenatal and infant care will continue to grow.

Third, whatever cash assistance, social, and health services the state decides to provide to immigrants, the need for them and other services will increase over time for several reasons: (1) use of services by immigrants increases with duration of stay; (2) the income of a large proportion of the first generation of immigrants, particularly Hispanics and refugees, will remain low throughout their lifetime (Chapter Five); (3) an increasing number of immigrants who have entered since 1965 are going to reach retirement age without access to Social Security and Medicare benefits (this chapter); and (4) a growing proportion of immigrants will naturalize after they have completed five years of residence (Chapter Five), making them eligible for the same programs as native-born residents.

Chapter Eleven

DISCUSSION AND POLICY IMPLICATIONS

In the previous chapters, we presented an assessment of the past 30 years of immigration to California, including a profile of the changing character of immigrants and their effects on the state's people, its economy, and its public sector. But the purpose of this analysis is not simply to describe what has happened. Instead, our goal is to promote a better understanding of the immigration phenomenon, the trade-offs it entails, and the present and future challenges it poses for California.

In this final chapter, we discuss the implications of our findings for public policy. We begin by summarizing our key findings. We then present some general observations about the nature of the phenomenon and its implications for drawing policy conclusions. Finally, we present a series of policy recommendations.

Our major conclusions can be summarized as follows. Although the characteristics of immigrants have changed over the past three decades, the state's economy continues to benefit from immigration. However, the magnitude of current flows—and the disproportionate share of poorly educated immigrants—combined with ongoing changes in the state's economy have increased the costs of immigration to the state's public sector and to some native-born workers. The state faces a growing challenge as it attempts to integrate these new immigrants while also trying to promote the welfare of the state and all its residents.

KEY FINDINGS

The number of immigrants entering the state has been increasing at unprecedented rates: More immigrants—1.8 million—entered the state during the 1970s than in all prior decades together. And that number doubled again to 3.5 million during the 1980s. Immigrants have continued to come at these high rates during the 1990s despite a recession that was the state's most severe since the Great Depression. As a result, immigrants now constitute in excess of one-quarter of California's residents and workers and are now responsible for more than half of the state's population and labor force growth.

The profile of these recent immigrants is more diverse ethnically, socio-demographically, and economically than in the past. California has more of more different types of immigrants than ever before. Also, its immigrants differ significantly from those in the rest of the country. Today, about 50 percent of California's foreign-born residents are from Mexico or Central America and another 33 percent are from Asia compared with 23 and 21 percent, respectively, in the rest of the country. California's immigrants are also much more likely to be illegal, newly legalized, or refugee than immigrants elsewhere in the country. And although immigrants at all levels of education have entered the state, there has been a steady decline in the average educational level of immigrants relative to that of native-born workers—a pattern that is not found in the rest of the country.

To a much greater extent than in the past, the rate at which immigrants and their children succeed economically and socially depends directly on their education. Highly educated immigrants—about half of the state's total—reach economic parity with native-born residents within their lifetimes. The other half—those with extremely low levels of education, primarily from Mexico and Central America—command low earnings and make little economic progress in their lifetimes. This raises serious concerns about whether and when their children will reach parity with other groups.

California's employers, and its economy more generally, have been the primary beneficiaries of this recent immigration. To employers, immigrants are cheaper but equally as productive as native-born workers across all levels of education from high school dropouts to college graduates. This comparative labor cost advantage has helped the state's economy grow more rapidly than that of the rest of the nation from 1960 to 1990. Although the state suffered a long and deep recession from 1990 to 1994—to which immigrants did not contribute—immigration has continued unabated. Currently, California's employment growth is once again exceeding that of the rest of the nation.

The economic benefits of immigration have not come without some costs. The high concentration of refugees and other low-income immigrants who are high users of public services has impacted the state fiscally. So has the growing number of elderly immigrants, who—without pensions and ineligible for Social Security—have sought SSI and MediCal, which are partially funded by the state. Finally, with an age structure conducive to childbearing and higher fertility rates, immigrants have been a major contributor to the rapid increase in primary and middle school enrollments, which have placed an additional burden on the state's resources. This effect will eventually be felt throughout the state's education system.

A declining demand for low-skill workers, combined with a continuing influx of low-skill immigrants, has increased competition for low-skill jobs within the state and hurt the earnings of some low-skill workers. It has also contributed to a growing disparity between the wages of foreign- and native-born workers. These effects vary across racial/ethnic groups and have been sensitive to changing economic conditions—having mostly affected the earnings of low-skill workers in the 1970s and the job opportunities of a smaller share of native-born workers in the 1980s. We estimate that, overall, between 1 and 1.5 percent of the adult native-born population has left the labor force or become unemployed because of immigration. In addition, immigration has played a role in the dropoff of net migration to California from other states.

Long-term economic and immigration trends appear to be headed in opposite directions in the future. The state's economy, for example, has been changing in several ways—albeit mostly independent of immigration. First, the rate of employment growth began declining from its 1970 peak even before the employment losses of the early 1990s and, while now recovering, is not projected to regain the rapid pace of the 1970–1990 period. Second, consistent with the shift in the state's economy away from manufacturing and toward higher-skill service and technology industries, employers have been placing a higher premium on a highly educated workforce. Eighty-five percent of the new jobs added to the state's economy between 1970 and 1990 were filled by workers with at least some postsecondary training. Third, there has been an increasing divergence between the economic fortunes of California's well-educated workers and the less educated, who now have to compete for fewer low-paying jobs and face the prospects of little career earnings growth. Fourth, in recent years the state has found itself facing repeated fiscal crises as various measures, beginning with Proposition 13, have limited the funds available to state and local government treasuries and restricted the way governments can spend what they do take in.

The pace of immigration, however, increased throughout the 1970 to 1990 period and has not backed off much, if at all, since 1990. Moreover, close to half of the most recent immigrants have educational backgrounds that are well below those of the native-born population.

In sum, there appears to be a growing divergence between current trends in the state's economy and immigration policies that are producing a steady inflow of poorly educated immigrants. If these trends continue, they are certain to raise a number of long-term issues for California:

- The earnings of poorly-educated immigrants are deteriorating, both relative to those of native-born workers and to those of earlier immigrants, and are likely to remain low throughout their working lives. What can and should the state do to improve the labor market prospects of these low-skill workers?
- Because the educational attainment of children depends in part on the earnings and education of their parents, the children of today's less-educated immigrants lag behind the state's other residents in educational attainment. If this trend continues, it will affect both the second generation's economic fortunes and, because immigrants and their children constitute an increasing share of new labor force entrants, the long-term productivity of the state's economy. How can the state increase educational attainment among the children of these low-skill immigrants?

- Immigration is increasing the demand for public services. The lower incomes and larger family sizes of recent immigrants have increased the demand for public services without increasing tax payments. Also, an increasing number of immigrants are reaching retirement age without access to Social Security and Medicare benefits. In addition, education is the public service most affected by immigration. Immigrants account for half of the recent growth of K–12 enrollments, and their full effects on the postsecondary system have yet to be felt. By 2005, the cohorts of students in high schools will be between 25 and 40 percent larger than current ones. How will the state respond to this demand and how will it be financed?
- Immigration has been a contributor, albeit not the primary factor, in increasing the earnings disparities between immigrants and native-born residents and between racial and ethnic groups in the state. What can the state do to ameliorate or reverse this trend?
- Immigration has been reducing the traditional advantages that California's economy has enjoyed relative to that of the rest of the country. This trend is manifest in a reduction of the educational advantage California's workers have held over workers nationwide and in a decline in the productivity advantage California continues to enjoy over other states. How can the state's economy regain its advantages over the rest of the nation to ensure its continued economic growth?
- The state's economy is generating no new jobs for high school dropouts and few for those with only a high school diploma. Over the past 35 years, poorly educated immigrants have essentially been backfilling jobs vacated by native-born workers who retire, move up the occupational ladder, or move to other states. Currently, younger immigrants already hold more than 60 percent of these jobs, and there will be increasingly fewer of these jobs available for new less-educated immigrants. How will the state's economy respond to this situation and the increasing competition for lower-skill jobs between its poorly educated foreign- and native-born workers?

GENERAL OBSERVATIONS

Although the challenges posed by immigration are clear, drawing specific policy recommendations from these findings is not, for several reasons. First, California's situation with respect to immigration is unique, both in terms of its unprecedented scale (in relation to the state's own prior history and to other states) and its tremendous diversity. Moreover, the number, share, and characteristics of immigrants differ substantially within the state itself. In sum, both the scale and the nature of the issues immigration raises for California differ from those in other states, just as they differ within California itself. Policymakers at the federal and state levels need to take these differences into account.

Second, immigration is not a monolithic phenomenon that can be addressed with a one-size-fits-all policy. As we have demonstrated, there are dramatic differences both in characteristics and in the experiences of California's immigrants by region of origin and educational level. These differences are so great that policies based on the average characteristics of immigrants may be relevant to one but totally irrelevant to other groups.

Third, and a corollary of the prior point, immigration should not be viewed as inherently "good" or "bad"; rather, the effects of immigration are likely to vary depending upon its volume, the characteristics of the immigrants, and the economic and social condition of the environment. It is not surprising, for example, that the heightened concern about immigration in the state coincided with the worst recession in the state's economy since the 1930s and a fiscal crisis at the state and local level.

Indeed, our findings provide multiple examples of this phenomenon. The effects of immigrants on native-born workers, for example, varied by decade, skill level, and, ethnicity. And, perhaps most strikingly, our results indicate that the economic success of immigrants themselves is increasingly tied to their educational and skill levels. Those immigrants who enter the country with high levels of educational attainment and strong English skills are well equipped to make a rapid and successful transition into the economy, while those with low levels of education and little facility with English are at a distinct disadvantage. Indeed, it appears that education may well have replaced hard work and enterprise as the single most important attribute for recent immigrants.

Fourth, how one views the effects of immigration varies depending upon whether one adopts a long- or short-term perspective. This is nowhere more apparent than when considering the provision of public services to immigrants. Since governments typically use a yearly perspective to view budgetary decisions, the provision of services to immigrants, especially new immigrants with low levels of education and low earnings who may still be adjusting to a new society, represents an immediate drain on resources. From a longer-term perspective, however, providing some services to immigrants, and especially their children, may pay off in the form of higher public revenues over the long term. Education is the clearest example of such a service. Although public expenditures on education represent consumption in the short run, we are willing to invest in it because we believe such investments pay off over the longer run. Health care and English language training are other examples of such services. Providing other services, however, may represent an immediate drain on resources without commensurate long-term benefits. Thus, decisions about which services to provide (and at what cost) may well vary depending upon which perspective is adopted.

Finally, although much of the attention on immigration focuses on national immigration policies and their effects on future immigration flows, many of the key issues California and other states confront are, in large part, shaped by the immigrants who are already here. This is certainly true with respect to the education and integration of current immigrants and their offspring. Hence, regardless of the policies developed to deal with future immigration, the state's immediate future will be more heavily decided by policies framed to deal with those who are already here. Thus, federal and state policies with regard to the integration of current immigrants are likely to play as important a role as future policies toward new immigrants in shaping California's experience with immigrants.

These observations and our key findings hold several implications that ought to be considered in the formulation of more comprehensive and rational immigration and integration policies at both the federal and state level. The first set of recommendations is targeted at the federal government because they either pertain to areas of direct federal responsibilities, e.g., immigration policy and its international consequences, or because they deal with state-level consequences of federal policy. The second set of recommendations is directed at the state of California and pertains specifically to integration policy.

FEDERAL POLICY RECOMMENDATIONS

At the federal level, we recommend the development of policies that would (1) increase the flexibility of U.S. legal immigration policy, (2) treat immigration from Mexico as a special case, and (3) speed up the integration of immigrants. Before we present these recommendations, however, we first briefly discuss the issues raised by illegal immigration.

Reducing Illegal Immigration: A Question of Effects and Values

The issue of illegal immigration is of considerable salience to California for several reasons. First, concern over illegal immigration and the perception that it was out of control was the trigger behind Proposition 187, which in many ways brought the immigration issue to the nation's attention. Second, although no one knows with any certainty how many illegal immigrants there currently are, it is clear that illegal immigration represents a significant share of total immigration to the state.[1] Moreover, although California is home to one-third of all the nation's immigrants, the state is home to an even higher percentage of the nation's illegal immigrant population.[2]

In analyzing the effects of immigration, we have not made a systematic distinction between the effects of illegal and legal immigrants, because we lacked detailed information on immigrants' legal status. We do not believe this will have a major effect on our results, however, since the results we have presented demonstrate that the socio-demographic and economic characteristics of immigrants

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[1] We estimate (see Chapter Two) that illegal aliens constitute about 20 percent of the state's foreign-born population.

[2] A little more than half of the illegal immigrants who received amnesty as a result of IRCA lived in California.

(e.g., their age, family status, education, English proficiency, and income) are more important than their legal status in determining how they affect the state and its residents.

In this context, it is useful to recognize that the vast majority of California's illegal immigrants originate from Mexico and Central America. As a result, we expect that the effects of illegal immigration in California will be similar to those of other Mexican and Central American immigration. In California, at least, this means that most illegal immigrants are likely to be young, have low educational levels, do not speak English well, have somewhat lower earnings than other immigrants, but have higher labor force participation. As indicated above, this suggests that illegal immigration to the state may benefit the state's economy, but it will place additional burdens on the state's public sector,[3] influence the labor market opportunities of low-skill native-born workers, and increase the challenge of educating and integrating these immigrants and their offspring.

Another factor that complicates attempts to distinguish between the effects of legal and illegal immigration is that illegal status if often a temporary one. DaVanzo et. al. (1994) demonstrate, for example, that many illegal immigrants enter the United States in anticipation of later obtaining legal status through the family-reunification or employment-related provisions of current immigration law. And indeed, many eventually do so. Moreover, many illegal immigrants do not settle permanently in the state (Reyes, 1997) but return to their home countries. Thus, the population of undocumented foreign-born residents living in the state is likely to vary over time, and, over the long term, illegal immigration is likely to be correlated with flows of legal immigrants. Thus, sorting out the full costs and benefits of illegal immigration may, in fact, be impossible.

However much emphasis has been placed on the effects of illegal aliens in the current debate, it is important to recognize that illegal immigration is not simply a question of effects, it is also an issue of values. Because illegal immigrants are violating U.S. immigration law either by entering the country illegally or violating the terms of their entry visas, they violate the "rule of law," the respect for which is important in a democratic society. Moreover, because illegal immigrants essentially bypass the entry queue in which other potential entrants often wait years, their behavior violates the principle of equity upon which our society is based. Public perceptions of legal immigrants are often shaped by perceptions of illegal immigrants, with the result that illegal immigration encourages a backlash against all immigration and immigrants. Additionally, a national immigration policy that incorporates one set of policies into formal law but tacitly follows a separate policy by allowing large-scale illegal immigration will undoubtedly be limited in its effectiveness.

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[3] Illegal immigrants, of course, are ineligible for income support services and the data suggest that their use of income support services is, in fact, quite low. However, like other state residents they use other public services that are available to state residents by virtue of their presence, e.g., hospitals, emergency rooms, adult education, highways, parks, and fire protection services, and their children attend the state's schools and, if native-born, qualify for certain types of public assistance.

In the past, efforts to control illegal immigration have floundered for lack of adequate resources for enforcement as well as the inadequacy of legal tools for enforcement. Recently, several steps have been taken to address these twin issues. The 1986 Immigration Reform and Control Act increased resources for border enforcement and prohibited employers from hiring illegal immigrants. It also provided for graduated civil and criminal sanctions for employers who do hire undocumented workers. However, lukewarm enforcement of employer sanctions, inadequate resources, and a documentation system vulnerable to fraud were ineffective in reducing illegal immigration (Crane et al., 1990; Fix and Hill, 1990; Bean, Vernez, and Keeley, 1989). In the early 1990s, in response to Proposition 187, additional resources were provided to the INS to stem illegal immigration at the border with Mexico. Finally, last year, Congress enacted the Illegal Immigration Reform and Immigrant Responsibility Act which (1) authorizes the hiring of 6,600 new border patrol agents over the next five years, (2) facilitates administrative deportation of illegal immigrants, (3) limits access to asylum, and (4) bars illegal aliens from adjusting their status until they have remained outside the United States for 10 years. It remains to be seen whether Congress and the administration will sustain this commitment over time and whether, once implemented, these measures will prove a viable and effective means for controlling illegal immigration.

Increase the Flexibility of U.S. Legal Immigration Policy

The federal government has direct responsibility for setting the nation's immigration policies. We believe that it is not desirable, even if it were practical, to either open or close America's borders to all comers. Doing so would ignore both the value immigration imparts and the varied interests that it serves. Rather, the goal of federal immigration policy should be to regulate the volume and composition of legal immigration so that its benefits are maximized, while its adverse effects are minimized. In this context we offer the following recommendations.

Maintain Overall Immigration Levels Within a Moderate Range. Current immigration policy establishes a fixed annual level of legal admissions—set at 675,000—that typically operates as a floor rather than a ceiling. However, the Immigration Act of 1996 will make the future legalization of undocumented immigrants more difficult. This occurs because immediate family members (spouses, parents, and minor children) of citizens are exempt from the overall ceiling and refugee admissions are adjusted annually to accommodate international conditions. As a result, the number of annual admissions has increased steadily.[4] Moreover, the number of legal admissions does not include an estimated 200,000–300,000 illegal immigrants added to the foreign-born stock each year. The costs of providing public services to immigrants and the economic effects of immigrants on current residents (both native-born residents and earlier immigrants) vary depending upon the condition of the economy. As a result, a backlash against all immigration can occur when the public perceives that immigration levels are too high.

A more balanced approach would be to adjust the total number of entrants so that it falls within a moderate annual range, depending upon current economic conditions, and incorporate within that range annual refugee admissions. Defining what constitutes a "moderate" range is, of course, open to debate, but a figure between the average level of 800,000 per year that occurred in the 1990s[5] and the average of 300,000 per year of the 1970s would provide a reasonable place to start. Moreover, incorporating refugee admissions within the annual ceiling would permit policymakers to adjust the balance between legal and refugee admissions to accommodate changing domestic and international conditions without exceeding the overall total.

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[4] The number of immigrant admissions to the United States has climbed from 3.3 million during the 1960s, to 4.5 million during the 1970s, to 7.3 million during the 1990s. Excluding the 2.2 million amnesty recipients and their dependents who were granted permanent residence status during the early 1990s, the total number of immigrants admitted by the INS has averaged 800,000 per year during the 1990s (INS, 1996b).

Whatever the total legal admission figure used, it is also important that the number of illegal immigrants be controlled. Limiting the number of legal admissions without gaining more effective control over the number of illegal immigrants (both those who enter without inspection and those who violate the terms of their non-immigrant visas) is neither effective nor equitable.

Allow Easier, More Frequent Changes to Immigration Regulations. The nature of immigration flows and the receiving environment can change dramatically in a short span of time. Currently, legal immigration is regulated with inflexible laws that Congress typically amends every 10 to 15 years. Laws should be authorized for shorter periods, or the Executive Branch should be allowed more flexibility to responsively manage immigration policy within broad policy parameters as to how many and which immigrants should be admitted annually.

Increase the Educational Levels of New Immigrants. In a society in which the demand for more educated workers is growing, admitting immigrants who are significantly less educated than the native-born population has the effect of putting them at a disadvantage that can take generations to make up. The federal government should expand the criteria used to determine eligibility for admission to include educational level, English proficiency, and work skills, in addition to family reunification. The prior recommendation about increasing the flexibility of integration policies would suggest that the number of immigrants admitted with specific characteristics could be varied depending upon economic conditions.

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[5] These totals exclude amnesty recipients and illegal immigrants.

Treat Immigration from Mexico as a Special Case

Mexico provides almost half of all immigrants to California and is the primary source of illegal immigration. Mexican immigrants are also typically among the least educated and have the lowest incomes. However, large numbers of California's Mexican American residents have close family ties with Mexican nationals. Additionally, California as a state and the United States as a country have a wide range of economic, environmental, social, and political interests in common with Mexico.

Mexico, in turn, has a high economic and social stake in seeing emigration flows continue. Emigration has reduced unemployment rates and raised wage levels for those who remained behind (Asch, 1994). In addition, remittances sent to family members by immigrants are one of the major sources of foreign exchange for Mexico (Durand, Parrado, and Massey, 1996). Any reduction in flows of both people and money between Mexico and the United States would affect the former disproportionately.

In sum, the issue of Mexican immigration cannot be divorced from the broader context of U.S.-Mexico relations—much as both the U.S. and Mexican governments might like it to be. Instead, both countries must realize the special role Mexican immigration plays in the lives of both countries. Moreover, both need to recognize their direct interest in ensuring that the flows of immigrants continue but at a controlled rate. Correspondingly, the United States should treat Mexico differently from other countries. In particular, efforts should be made to develop greater bilateral cooperation on immigration matters. This might entail expanding the number of legal residence permits available for Mexican immigrants in exchange for Mexican government collaboration on border enforcement.

Develop a Proactive Policy Regarding the Integration of Immigrants

It is essential that immigrants be integrated as soon as possible into their host communities, both for their and the communities' sakes. In addition to changing the current approach to immigration policy per se, we also recommend that the government develop a more active policy of encouraging the integration of existing immigrants into the social, economic, and political life of the country. Since, as we have demonstrated, the characteristics of immigrants often differ dramatically, efforts designed to encourage more complete participation by immigrants in society are better left to state and local than federal officials. However, the federal government has a special role to play in two specific areas—naturalization and English-language proficiency—and in sharing the short-term burden of providing public services to immigrants in areas where immigrants are highly concentrated.

Encourage Naturalization. California and other state governments can more easily balance the interests of all residents if the large share of those residents who are not yet citizens become citizens. But naturalization is a very slow process, slower for some immigrant groups than for others. Late last year, Congress enacted the Personal Responsibility and Work Reconciliation Act of 1996—the Welfare Reform Act—which bars legal immigrants access to food stamps and SSI and limits their eligibility for other federal means-tested programs. It remains to be seen how this departure from treating legal immigrants the same as citizens will affect the integration process of immigrants. The federal government has recently begun moving from a laissez-faire policy on naturalization toward more active facilitation. We endorse this shift in approach and recommend it be continued.

Support Programs Designed to Expedite English Proficiency. Although the vast majority of immigrants who remain in this country eventually learn English, some groups lag seriously in the time it takes them to develop that facility. The importance of learning English rapidly for economic success and integration is widely recognized, and immigrants themselves believe it is important to attain English proficiency. Thus, it is important that the government promote the rapid acquisition of English language skills. Maintaining English-language requirements for naturalization and providing support to help immigrants improve their verbal and written English-language skills are two ways the federal government can ease the integration of immigrants in the state of California.

Review the Allocation of Costs Between Federal and State Governments. Although immigration is preeminently a federal responsibility, there is little question that states like California feel the impact of those policies disproportionately. This is particularly the case for education, which is primarily funded by state and local governments. Correspondingly, the federal government must be willing to consider ways to alleviate the costs federal immigration policies can impose on those few state and local governments. We recognize that justly allocating costs between the federal and state levels touches on beliefs about federal and state roles that are beyond the bounds of objective analysis. Our recommendation is based on the belief that by linking policy decisions regarding immigrant admissions more closely to the responsibility for the programs needed to ensure their rapid integration, the federal government can help ensure that both it and California will make choices serving the national interest.

STATE POLICY RECOMMENDATIONS

California's ability to act on immigration, which is limited by federal prerogatives and its willingness to take the lead, may be limited by a belief that it already bears a disproportionate share of costs. Yet the state cannot avoid the long-term issue of integrating its immigrants as rapidly as possible. Immigration's direct social and economic effects are too pervasive. Correspondingly, California should take steps to reduce the long-term costs of immigration and increase its long-term benefits. As our analysis makes clear, the most obvious means to do this are to address the issues of education, English acquisition, and naturalization.

Ensure Equality of Educational Opportunity Through College

Our results show that many immigrants and their offspring, especially Hispanics, are losing ground to other immigrants and the native-born population in educational attainment. If Californians want to sustain a single integrated society, they will have to alter the state's secular trend toward disinvesting in education, particularly higher education. Special efforts should be undertaken to encourage high school graduation and college attendance within the Hispanic community and to discover ways to enhance Hispanics' educational achievement.

Encourage English Proficiency and Naturalization

We believe the federal government is in a better position to promote these keys to integration (see above). But to the extent that federal efforts are insufficient, California will suffer disproportionate consequences. The state should be ready to complement or, if necessary, supplement federal efforts.

While these actions should help immigrants make the needed adjustments to California's economy and society, more may well be needed. In particular, as Proposition 187 and its aftermath have demonstrated, immigration has the potential to exacerbate existing division within California, the nation's largest and most ethnically diverse state.[6] Responsible leaders within the state should take action to prevent this from occurring, since it could well have serious negative consequences for the economic, social, and political fabric of the state. We suggest that the state consider the following two steps to deal with this issue.

Establish a State Office of Immigrant Affairs

Even though elected officials and program administrators respond to the interests of particular racial and ethnic groups, no one state agency or representative appears to consider the effects of public policies on immigrants per se. Nor is anyone in particular responsible for concerns of native-born residents about the effects of immigrants on them. Moreover, despite the diverse effects that immigrants have on the state's public and private sectors, there is no agency within the state that monitors and coordinates immigration issues. The state should consider establishing an independent office of immigrant affairs that would have three principal functions: monitoring the needs of immigrants, tracking their impact on society, and coordinating state policies with regard to immigrants.

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[6] Non-Hispanic whites constitute 55 percent of California's population, well below the national average of 75 percent. In only one state, Hawaii, is this percentage lower (30.4 percent). Moreover, there is a much more even balance of ethnic groups within California's minority population than within Hawaii's minority population, which is predominately non-Hispanic white (U.S. Department of Commerce, 1996).

Increase Public Understanding of Immigration Issues

If the educational and economic gaps between California's immigrants and native-born residents continue to widen, there will be other divisions within the state. An increasing generation gap pits programs intended for the education and welfare of children against programs for the elderly such as Medicare and Social Security. This gap between young and old is exacerbated by a young population of immigrants and their children and an aging native-born population. The current debate about affirmative action in the state is partly fueled by perceived competition between newcomers and earlier generations. Historically, Southern and Northern California have competed over resources and political power, and these differences may be compounded by the fact that immigrants are distributed quite unevenly across the state. Also, the growing economic disparity between those with and those without higher education has added a new dimension to this mix.

Finally, it is particularly important that Californians have a clearer understanding of the immigration issue and its long-term implications. It might seem that immigration does not need a higher profile. But public perceptions of immigration and its impacts will have to go deeper than the sense that illegal immigrants are using too many public services if the political will to avoid division within the state is to accumulate and be exercised. The current government of a united California should make greater public understanding of immigration issues a priority.

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Appendix B

ESTIMATED LEGAL STATUS

Legal status is probably the most controversial dimension along which to classify recent immigrants. This controversy arises for two reasons. First, illegal or undocumented immigrants are unquestionably the most controversial component of California's foreign-born population. As such, they (and their characteristics) are of considerable policy importance. Second, none of the conventional sources used to describe the recent immigrant population identifies the full range of legal statuses.[1] As a result, such studies rely on proxy variables to distinguish among different legal statuses—a procedure that often leads to controversy regarding the accuracy of the resulting estimates.

We focus here on four categories of immigrants: those who have become naturalized citizens (regardless of their legal status upon entry), refugees, illegal/undocumented immigrants, and other legal immigrants. Three different data sources were used to identify and estimate the characteristics of these different groups: the 1990 Census, California Department of Finance reports on the state's refugee population, and a special survey on recently legalized aliens residing in California conducted for the state by CASAS.[2]

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[1] Studies describing the characteristics of the immigrant population fall into one of two categories. The first focuses on subpopulations of immigrants, e.g., ethnic groups or those located in specific communities that are often based on specialized data sources like local area surveys. The second are comprehensive studies that attempt to describe the entire population. These studies typically rely on the Census (as does this study) for the bulk of their data. The Census, however, identifies only one distinction among the foreign-born population: naturalized citizens and all others.

The different groups were identified as follows. First, naturalized citizens are identified as such in the 1990 Census files.[3] Refugees are identified by first examining the state department of finance reports of refugee entries (and secondary migrants[4]) by country of origin and date of entry. These counts of refugees by country and date of entry were then compared with the distribution of all immigrant entrants from those countries by date of entry to identify what fraction of the total entrants were refugees. Since the correspondence between total entrants and refugee entrants is quite close,[5] all entrants from selected countries during particular periods were classified as refugees in the 1990 Census file. The characteristics of illegal immigrants are based on the data contained in the CASAS survey of amnesty recipients, who were, of course, illegal immigrants until they received amnesty.

This approach assumes that the characteristics of currently illegal immigrants are similar to those illegal immigrants who received amnesty. There were two different provisions of the 1986 IRCA law under which illegal immigrants could qualify for amnesty: immigrants who entered the United States prior to 1982 and had resided here continuously since then, referred to as pre-82s, and illegal immigrants who had spent 90 days working in agriculture in the three years prior to the passage of IRCA (referred to as SAWs).[6] Because the vast majority of the SAWs entered much more recently than the pre-82s, we assume that they are more likely to resemble current illegal immigrants. Finally, the other legal immigrants are identified in the Census files as those immigrants who are neither naturalized citizens nor refugees.

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[2] The CASAS survey was conducted on a stratified sample of recently legalized immigrants who were taking English language classes in the state. The sample was stratified to ensure an adequate sample of both pre-82 and SAW immigrants and by geographic area of the state. Since all immigrants who received amnesty were required to demonstrate proficiency in English to retain their eligibility for permanent residence status and attendance at ESL classes is one way to demonstrate that proficiency, using a sample of language class attendees is not likely to bias the results significantly. However, the stratification by area oversampled amnesty recipients from Los Angeles and may result in an overrepresentation of urban SAWs.

[3] Immigrants self-identify themselves.

[4] Secondary migrants are those refugees who initially settled in another state but later moved to California.

[5] In other words, most entrants from particular countries during specific periods enter either as refugees or legal permanent immigrants but not both.

[6] Special agricultural workers.

Although we believe this procedure provides the most reliable basis for identifying the characteristics of these different categories of immigrants, there are some problems with our approach. First, our definition of refugees is based on an immigrant's date of entry and country of origin, not on his or her actual legal status. Although as noted above, the correspondence between legal status and country of origin is reasonably close, our procedure overcounts the number of refugees by about 5 percent. Second, because we are unable to identify illegal immigrants in the Census file (and rely instead on the CASAS data), our other immigrant category includes both legal and illegal immigrants. We cannot be sure of the exact proportions of each but suspect that the percentage of illegal immigrants in the category may be as high as 30 to 40 percent.

Additionally, there are several problems with our definition of the illegal population. First, as noted above, we assume that immigrants receiving amnesty are representative of recent illegal immigrants. While this may be a reasonable assumption in terms of SAWs, it is more questionable for the pre-82 immigrants who, by definition, entered California prior to 1982. Correspondingly, in reporting our results, we present data separately for pre-82s and SAWs. Second, immigrants become illegal in one of two ways. They may either cross the border illegally or they may enter the country legally but then violate the terms of their visas.[7] Judging from the heavily Mexican and Central American composition of amnesty seekers (immigrants from both areas are more likely to be EWIs), many more EWIs than visa abusers applied for amnesty. Recent studies suggest, however, that visa abusers compose an increasing fraction of all illegal immigrants.[8] Third, the CASAS sampling procedures led to an overrepresentation of Mexican immigrants.

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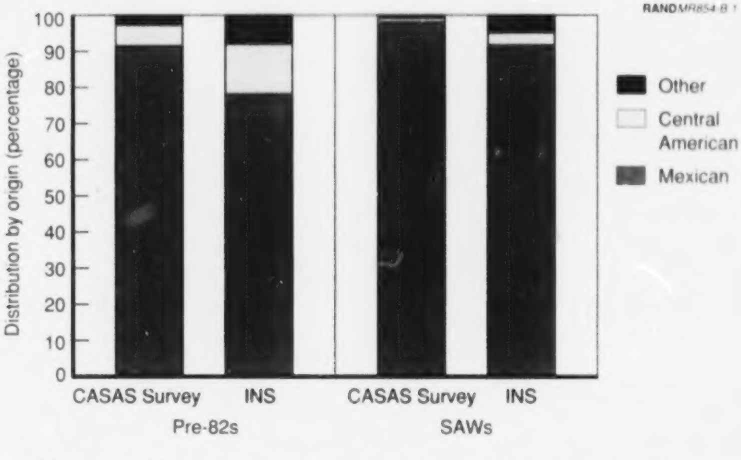
[7] The former are referred to as EWIs (entry without inspection), the latter as visa abusers.

This last point is demonstrated in Figure B.1, which compares the origins of both pre-82 and SAW immigrants as reported in INS data with their respective percentages in the CASAS data. These data highlight two points. First, Mexican immigrants constituted the vast majority of those California residents who applied for amnesty (78 percent of the pre-82 applicants and 91 percent of the SAWs). Second, Mexicans constituted an even larger share of the amnesty population that was interviewed by CASAS.

In sum, while our estimation procedure is not without its problems, we believe it still provides a sounder basis for estimating the characteristics of recent California immigrants by legal status than does any feasible alternative.



SOURCE: CASAS, 1989, and Immigration and Naturalization Service, 1992.

Figure B.1

SAW Programs

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[8] This may, of course, be partly a by-product of the amnesty law, which legalized a very large fraction of the previously illegal/undocumented EWIs.

Appendix C

ADDITIONAL INFORMATION ON THE CALIFORNIA ECONOMY AND IMMIGRATION

This appendix provides more detailed information on specific topics as referred to in the main text.

Table C.1

Sectoral Shifts in the California Economy, 1960–1990

	Sectoral Shift[a] (percentage points)			1960–1990 Change in Share of Total Labor Force (percentage points)	1990 Share of Total Labor Force (in percentage)
Major Sector	1960–1970	1970–1980	1980–1990		
Agriculture	23.4	46.1	27.1	−1.4	3.3
Construction	−5.5	20.1	36.7	0.3	7.0
Manufacturing					
Durable	4.8	16.3	18.7	−4.7	11.4
Nondurable	6.0	24.4	19.5	−2.9	5.4
Transportation	−15.2	13.8	11.6	0.4	4.1
Communications	20.0	−2.3	−3.4	−0.1	1.4
Utilities	1.5	6.8	18.9	−0.4	1.1
Wholesale	14.0	1.0	20.3	.7	4.5
Retail	22.2	11.5	5.9	1.7	16.4
FIRE	11.3	18.3	3.9	2.3	7.3
Business/repair	14.4	10.4	5.2	2.5	5.9
Personal services	14.8	15.3	24.7	−2.1	3.5
Entertainment	15.5	−12.6	.9	3.2	4.7
Health	13.4	2.2	2.8	1.7	5.8
Education	17.2	−1.4	7.7	1.9	7.2
Other professional	30.5	13.2	11.7	4.2	6.9
Government	10.2	−14.4	8.1	−1.7	4.3
Total	15.0	12.5	15.2	NA	NA

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990.

NOTE: NA means not applicable.

[a] The sectoral shift is the difference between the rate of growth of a specific sector in California and the rate of growth of the same sector in the rest of the nation. A positive value indicates the percentage points at which the sector has grown faster in California than in the rest of the nation. A negative value indicates the percentage points at which a sector has grown slower in California than in the rest of the nation.

Table C.2

Employment Growth by Sectors, in California, 1960–1995 (in percentage)

Sector	1960–1970	1970–1980	1980–1990	1990–1995
Agriculture	-11.2	46.9	32.0	4.1
Construction	11.3	49.8	55.1	-13.1
Manufacturing	21.8	32.8	7.3	-20.1
Durable	10.7	29.8	12.7	-0.6
Nondurable	25.5	68.2	28.5	6.8
Transportation	49.0	32.2	10.8	-3.8
Communications	42.9	10.4	13.0	-2.0
Utilities	50.7	40.2	38.8	-4.3
Wholesale trade	48.7	41.9	30.1	-1.4
Retail trade	50.7	71.0	39.6	-8.9
FIRE	62.1	80.2	45.9	13.9
Business/repair	7.0	2.0	41.6	-5.1
Entertainment	42.1	53.8	60.2	26.3
Health	77.2	73.9	35.8	12.0
Education	95.4	38.4	22.3	4.4
Other professional	126.7	43.6	94.7	19.2
Government	42.9	10.4	13.0	3.8
Total	31.8	41.6	32.0	1.5

SOURCES: U.S. Department of Commerce, *Public Use Sample*, 1960, 1970, 1980, and 1990; U.S. Department of Commerce, 1991 and 1996; and unpublished tabulations from the California Employment and Development Department.

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Table C.3

Share of Immigrants by Occupation, in California and the Rest of the Nation, 1960 and 1990 (in percentage)

	California		The Rest of the Nation	
Sector	1960	1990	1960	1990
Exec/prof/tech	9.0	19.0	6.5	7.0
Sales worker	9.0	19.0	5.0	6.0
Clerical	7.0	20.0	5.0	6.0
Craftsmen/foremen	9.0	26.0	7.5	7.0
Operatives	12.0	54.0	8.0	10.0
Transport engineer	5.0	23.0	4.0	6.0
Laborer	14.0	37.0	7.0	8.0
Private household	15.0	64.0	7.5	20.0
Protective services	3.0	10.0	5.0	4.0
Other services	13.0	40.0	9.0	9.5
Farming	32.0	66.0	4.0	8.0
All	10.0	25.0	6.5	7.5

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960 and 1990.

Table C.4

Share of Immigrants by Major Sectors of the California and National Economy, 1960 and 1990 (in percentage)

	California		The Rest of the Nation	
Sector	1960	1990	1960	1990
Agriculture	28.5	54.1	3.7	7.9
Mining	4.0	11.6	2.4	3.7
Construction	8.7	24.2	5.8	7.1
Manufacturing				
Durable	8.3	32.8	6.7	7.3
Nondurable	14.1	41.6	8.2	8.6
Transportation	9.4	20.2	5.6	6.3
Communications	4.3	12.1	3.1	4.4
Utilities	5.4	14.8	3.6	3.4
Wholesale	11.3	26.3	6.3	7.1
Retail	11.2	27.1	6.9	7.5
FIRE	9.2	18.4	6.0	6.5
Business/repair	8.1	26.5	5.8	7.9
Personal services	16.3	41.1	8.3	13.1
Entertainment	11.6	16.1	7.3	6.6
Health	10.5	22.5	6.7	7.7
Education	6.4	14.1	4.0	5.6
Other professional	11.4	16.4	7.2	6.1
Government	4.5	11.1	3.0	3.8
All	10.4	25.6	6.0	7.1

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1960 and 1990.

Table C.5

Weekly Earnings by Female Native-Born Women, by Level of Education and Racial/Ethnic Group, in California and the Rest of Nation, 1970–1990

Race/Ethnicity and Education	Weekly Earnings (in constant 1989 dollars)					
	California			The Rest of the Nation		
	1970	1980	1990	1970	1980	1990
Less Than 12 Years of Schooling						
Non-Hispanic white	301	269	254	250	236	207
African American	280	314	307	203	256	237
East Asian American[a]	287	269	211	263	236	200
Mexican American	280	296	277	199	229	215
Other Hispanic American	298	300	271	257	251	241
12 Years of Schooling						
Non-Hispanic white	362	352	367	301	290	291
African American	326	379	378	280	313	311
East Asian American[a]	362	372	368	345	321	311
Mexican American	319	334	355	260	275	251
Other Hispanic American	337	366	365	297	295	311
13–15 Years of Schooling						
Non-Hispanic white	372	381	426	321	314	339
African American	390	402	440	331	343	359
East Asian American[a]	351	359	424	365	309	418
Mexican American	347	345	389	287	285	310
Other Hispanic American	365	361	430	334	307	373

SOURCE: Data are based on U.S. Department of Commerce, *Public Use Sample*, 1970, 1980, and 1990.

[a] East Asian American includes native-born residents of Chinese, Japanese, Korean, and Filipino origin.

Table C.6

Weekly Earnings by Native-Born Men, by Level of Education and Racial/Ethnic Group, California and the Rest of the Nation, 1970–1990

	Weekly Earnings (in constant 1989 dollars)					
	California			The Rest of the Nation		
Race/Ethnicity and Education	1970	1980	1990	1970	1980	1990
Less Than 12 Years of Schooling						
Non-Hispanic white	578	528	439	476	453	381
African American	464	461	422	338	392	355
East Asian American[a]	528	429	291	490	439	285
Mexican American	489	470	403	348	395	341
Other Hispanic American	535	490	390	409	386	373
12 Years of Schooling						
Non-Hispanic white	663	646	608	578	564	515
African American	493	501	463	419	446	404
East Asian American[a]	617	503	496	588	540	593
Mexican American	532	528	490	422	470	380
Other Hispanic American	596	549	513	503	461	461
13–15 Years of Schooling						
Non-Hispanic white	713	693	707	625	598	590
African American	539	564	568	460	487	473
East Asian American[a]	589	589	605	534	511	535
Mexican American	546	589	571	463	492	478
Other Hispanic American	620	655	607	557	511	517

SOURCE: Data are based on U.S. Department of Commerce, *Public Use Sample*, 1970, 1980, and 1990.

[a] East Asian American includes native-born residents of Chinese, Japanese, Korean, and Filipino origin.

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Table C.7

Monthly Participation Rates in Public Services, by Racial/Ethnic Group and Immigration Status, in the Nation, 1990–1993

Type of Program	Age Group	Non-Hispanic White		Non-Hispanic Black		Asian[a]		Hispanics				All	
								Mexican		Central American			
		I	N	I	N	I	N	I	N	I	N	I	N
Cash Program													
Aid to Families with Dependent Children	0–64	1.2	2.1	4.1	14.9	.1	5.2	6.0	9.5	7.3	7.8	4.0	4.3
General Assistance	0–64	.2	.3	.5	1.8	.2	0.0	.6	.3	.5	.6	.6	.6
Supplemental Security Income (SSI)	0–64	1.0	.9	.9	3.5	.6	.2	6.5	1.4	1.0	3.0	.9	1.3
	65 or more	1.8	3.7	21.5	22.1	28.3	6.9	34.9	26.0	40.0	—	15.7	5.8
Nutrition													
Food stamps	All	2.2	4.2	8.1	23.3	1.1	5.5	14.7	19.2	11.2	12.4	8.0	7.4
Women, Infants and Children (WIC)	0–44	.4	1.1	1.2	2.7	.1	.1	3.0	2.2	1.3	2.1	1.4	1.4
School lunch	0–17	13.4	14.8	39.6	56.3	17.4	24.2	64.3	51.1	53.7	31.1	42.3	24.3
School breakfast	0–17	5.3	6.0	21.5	33.1	6.0	7.8	34.0	27.5	20.8	13.0	20.3	12.0
Health													
Medicaid	0–64	3.3	5.0	7.6	24.2	1.3	6.8	15.3	16.6	13.6	14.1	9.2	8.4
	65 or more	3.4	5.7	27.1	26.9	38.4	9.5	39.9	29.4	46.8	19.5	20.3	8.1
Medicare	0–64	3.2	2.8	1.0	3.4	.9	.7	.8	1.3	.6	1.7	1.4	2.8
	65 or more	98.8	98.3	90.2	96.4	71.7	88.0	88.6	95.4	78.9	49.7	91.3	98.0

Table C.7—continued

								Hispanics					
		Non-Hispanic White		Non-Hispanic Black		Asian[a]		Mexican		Central American		All	
Type of Program	Age Group	I	N	I	N	I	N	I	N	I	N	I	N
Housing													
Public housing	All	.3	.6	.6	4.0	.5	.4	3.5	1.1	1.6	2.8	1.4	1.1
Low-rent assistance	All	1.1	1.1	1.9	4.6	1.2	.2	2.8	3.4	4.1	4.6	2.1	1.7
Energy assistance	All	.8	.7	.1	2.0	.1	.1	1.2	2.0	1.3	1.5	.8	.9
Other													
Unemployment Compensation	16–64	2.0	2.0	1.9	2.2	1.3	1.2	4.3	2.3	2.0	2.8	2.4	2.1
Social Security	0–64	6.6	5.5	1.6	6.8	1.7	3.5	2.1	4.4	2.0	4.9	2.9	5.6
	65 or more	93.9	94.3	77.2	89.0	63.2	86.4	70.0	90.8	63.8	49.7	82.3	93.7

SOURCE: U.S. Department of Commerce, *Survey of Income and Programs Participation*, 1990–1993.

NOTE: Participation rates are based on individual responses. Children of immigrants are counted as immigrants regardless of country of birth. The monthly rate is the average monthly participation rates over the period from 1990 to 1993. A blank means the sample size is too small to compute a rate. I means immigrants and N means the native-born population. These estimates exclude refugees.

[a] Includes China, Japan, Korea, and the Philippines.

Table C.8

Number of Children by Age and Immigration Status, in California, 1970–1990

Age	Immigrants			Native-Born Population			All		
Group	1970	1980	1990	1970	1980	1990	1970	1980	1990
0–11	115,900	300,530	410,744	4,265,350	3,875,200	5,024,416	4,381,250	4,175,730	5,435,160
12–18	128,600	319,320	548,595	2,504,500	2,427,800	2,162,402	2,633,100	2,747,120	2,710,997
Total	244,500	620,020	959,339	6,769,850	6,303,000	7,186,818	7,014,350	6,923,020	8,146,157

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970, 1980, and 1990.

Table C.9

1995 and Projected 2005 Junior-High-School-Age Cohort, by Race/Ethnicity, in California (in thousands)

	1995 Cohort			2005 Cohort		
Race/Ethnicity	1980 Cohort of 1 Year Olds	1980–1995 Additions to Cohort	Total Year 1995	1980 Cohort of 1 Year Olds	1980–1995 Additions to Cohort	Total Year 2005
Asian	19	25	44	49	25	74
Native born	17		17	45		45
Immigrant	2	25	27	4	25	29
Black	32	.4	33	42	.4	43
Native born	32		32	42		42
Immigrant	.3	.4	.7	.2	.4	.6
Hispanic	111	41	152	189	41	230
Native born	104		104	176		176
Immigrant	6	41	47	13	41	54
Non-Hispanic whites	181	5	186	236	5	241
Native born	179		179	235		235
Immigrant	2	5	7	1	5	6
All	348	72	419	520		593
Native-born population	337		337	503		503
Immigrants	11	72	83	18	72	90

SOURCE: U.S. Department of Commerce, *Public Use Sample*, 1970, 1980, and 1990.

NOTE: Projections for the year 2005 assume that the level of immigration that prevailed during the 1980–1990 decade will continue through the year 2005. It also assumes that in- and out-migration of native-born children are equivalent (a trend that prevailed during the 1980–1990 time period).

Appendix D

ESTIMATING THE EFFECTS OF IMMIGRATION ON THE EMPLOYMENT AND EARNINGS OF THE NATIVE-BORN POPULATION

The basic approach used to generate "Estimate II" in Chapter Nine follows that of Altonji and Card (1991). The variation in four economic outcomes (i.e., participation, employment, weekly wages, and annual earnings) across 124 labor markets is related to the variation in the share of the working-age population who are immigrants. (Throughout this appendix, "immigrant share" and "immigrant intensity" will be used interchangeably when referring to the share of the working-age population who are immigrants.) In addition, using the 1970, 1980, and 1990 Censuses, a variety of observed and unobserved differences across labor markets are controlled, and the potential endogeneity of the share of immigrants is incorporated by implementing instrumental variables techniques.

The analysis proceeds in two steps. Using individual-level data from each Census, in the first step, regressions for each of the subgroups defined above for each of the four outcomes are estimated for each of the three years. For weekly wages and annual earnings, log versions of the outcomes are analyzed using ordinary least squares (OLS) regressions. For labor force participation and employment, linear probability models are estimated. In each model a dummy variable for each of the 124 labor markets is included, with the constant suppressed.[1] Following Murphy and Welch (1990), the regression controls for age using a quartic specification. For those with less than 12 years of schooling, indicators are also included for whether the individual had 0 to 4, 5 to 8, 9, or 10 years of schooling, with 11 years as the reference group. For those with more than 12 years of schooling, indicator variables for 13 to 15 and 16 years are included, with 17 or more years of schooling as the reference group.[2] In addition, the returns to education are allowed to vary with age by interacting each education indicator with each order of the age quartic.

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[1] If there are not enough workers in a given labor market to meet the selection criterion above, then the indicator for that labor market is suppressed.

The sample size for these regressions varies across subgroups and years, with the smallest group consisting of 3,008 observations for Hispanic men with 12 years of schooling and with positive annual earnings in 1970. The analysis of labor force participation among white men with more than 12 years of schooling in 1990 had the largest sample—298,349.

The second step of the analysis regresses the coefficient estimates associated with the 124 labor market indicators from the first step on the share of the working-age population who are immigrants in each corresponding labor market.[3] Note that this is not the subgroup-specific share who are immigrants, it is the share of the entire working-age population in that area who are immigrants; the sample sizes in the Censuses are too small to calculate more narrowly defined shares in all years.[4]

In addition to the immigrant share, controls for the log of the population in the labor market and average age and education within the subgroup are included.[5] The last two variables are added because Altonji and Card (1991) found that average wages are correlated across labor markets with average education even after adjusting for education and age at the individual level. We also found this relationship and, therefore, controlled for average education and age within each subgroup in the second stage.[6]

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[2] The education variable was different in 1990 than in previous years. The categories that represent schooling of less than 12 years are exactly as reported in the 1990 Census. Those with some college or any associate degree are placed in the "13 to 15 years of schooling" group. Those with a bachelor's degree are assumed to have 16 years of schooling, while those with a master's, professional, or doctorate degree are coded as having 17 or more years of schooling.

[3] There are not large enough samples for some demographic groups in some of the 124 labor markets; therefore, for these groups the number of labor markets examined is less than 124.

[4] The immigrant share for each labor market was estimated internally from the Census analysis files. Altonji and Card (1991) use external estimates of the percentage who are immigrants that are based on larger samples, which increases the precision of their estimate. However, some labor market boundaries had to be redefined to make them consistent across Censuses. As a result, the boundaries of the labor markets that are used do not exactly match the boundaries used in calculations made by other researchers; therefore, the internal estimates are preferred to ensure that the definition of the "labor market" used for the immigrant share corresponds directly to the outcome measures.

The second step is estimated in three ways. Different assumptions need to be made in each of the three cases to obtain consistent estimates of the effects of immigrants on native-born workers. The first approach requires the most restrictive, while the third (arguably) requires the least restrictive assumptions. In the first approach, each of the three cross-sections are examined individually: 1970, 1980, and 1990. This cross-sectional approach has been implemented in previous studies. However, the estimates from these cross-sectional models will be biased if there is some uncontrolled labor market level characteristic that influences wages or employment of workers and is correlated with immigrant intensity in the labor market. For example, immigrants may migrate to labor markets with high wages.

To address this shortcoming of the cross-sectional models, first-differenced models are estimated. These models relate the *change* in wages and employment to the *change* in immigrant intensity between the years 1970 and 1980, and 1980 and 1990.[7] The first-

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[5] To calculate the average years of schooling using the 1990 education variable, we assume that individuals who reported 1 to 4 and 5 to 8 years of schooling have 2.5 and 6.5 years of schooling, respectively. Those with some college, an associate's degree, a bachelor's degree, and an advanced degree are assumed to have 13, 14, 16, and 17 years of schooling, respectively.

[6] The effects of immigrant share were also estimated in each of the models without making adjustments for age and education within the subgroups to determine the sensitivity of the results. This simply leads to regressing the labor market average of the outcome variable on the immigrant share in the labor market. Some previous studies, for example Butcher and Card (1991), have examined the relationship without making these adjustments. For the most part, adjusting for these differences does not affect the first-differenced instrumental-variables results substantially, which are the preferred estimates. However, in some cases there are differences. For example, the coefficient on immigrant share in the equation for annual earnings (not controlling for cost of living) among white female dropouts in the 1980s is 0.79 (t-statistic of 1.88) if the adjustments are not made, and the estimates are –0.10 (t-statistic of 0.23) when the adjustments are incorporated.

[7] The change between 1970 to 1990 was also examined, but the results did not add to the substantive findings, so they are not reported.

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differenced models implicitly control for *all* factors that are specific to a given labor market and do not change over time. These estimates will be unbiased if all other factors that affect the change in wages and employment of native-born workers are not correlated with the change in immigrant intensity across labor markets. However, if this assumption does not hold, then the first-differenced estimates will also be biased. For example, foreigners may immigrate to labor markets that offer jobs with expected high wage *growth*, and this would induce a positive association between the change in wages and the change in immigrant share, biasing the first-differenced estimates.

Although there is not substantial evidence that immigrants migrate to labor markets within the United States based on current (or future) relative economic conditions in those labor markets (e.g., Bartel 1989), this last possibility, and endogeneity more generally, is addressed by employing instrumental variables (IV). Two variables are examined as instruments: the share of immigrants in the labor market at the beginning of the period, and the change in immigrant share in the preceding period. The former was used by Altonji and Card (1991), with the notion being that the decision of where to migrate by immigrants arriving between, for example, 1980 and 1990 is a function of the share who were immigrants in the various labor markets at the beginning of the period; that is, immigrants are likely to move to areas where other similar immigrants have historically migrated and currently live because of strong information networks.[8] Massey et al. (1994) provide an extensive review of the evidence that supports this claim.[9]

In using IV, Bound, Jaeger, and Baker (1995) demonstrate that the degree of finite sample bias (relative to OLS) depends on the F statistic on the first stage model. The F statistic corresponding to each of the models were calculated, and they ranged from 10.4 to 219.5. In only 6 of the 128 models estimated[10] was the F statistic less than 20 (not shown here). These results indicate that the instruments explain a large share of the variation in immigrant intensity. As a result, the F statistic is high, suggesting a very low finite sample bias.

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[8] Note that since data for 1960 are not examined (because the county identifiers needed for the analyses are not available in that Census), the second instrument is not used for examining changes between 1970 and 1980. In addition, models were also estimated using immigrant intensity in 1970 *and* 1980 as instruments for the first-differenced models for 1990 to 1980. Similar qualitative results were obtained as in the models that use only 1980s immigrant share as the instrument (Schoeni, McCarthy, and Vernez, 1997).

[9] The simple cross-sectional estimates may also be biased toward zero if natives are less likely to migrate to areas where immigrants locate.

For the parameter estimates to be consistent, the instrument must be uncorrelated with the error in the equation explaining wage or employment growth (after controlling for the change in immigrant intensity in that period and for gender, race/ethnicity, age, education, and population of the labor market). This is the maintained assumption. Use of the lagged change in immigrant intensity imposes perhaps the least restrictive assumptions of the two instruments. Results using both sets of instruments are compared to determine the sensitivity of the findings.

Because there is variation across labor markets in the number of individuals included in the analysis, weighted least squares is used where the weights are the square root of the number of observations within the given subgroup for each labor market in each year. Following Altonji and Card, in the first-differenced estimation (both with and without instrumental variables), the weight used is $(N_{t-1}^{-1} + N_t^{-1})^{-1/2}$, where N_t is the number of observations in the given subgroup within the labor market at time t.

Schoeni, McCarthy, and Vernez (1997) provide a complete discussion of the results from the cross-sectional, first-differenced, and first-differenced IV models. The preferred estimates are derived from the first-differenced IV model, which are summarized in Table D.1. These estimates are the basis for the estimates of the effects of immigration in California discussed in Chapter Nine.

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[10] Models are estimated for each demographic group with each set of instrumental variables.

Table D.1

Estimated Effects of a One Percentage Point Increase in Immigrant Intensity on Each Outcome for Each Demographic Subgroup

	1970s				1980s			
Group and Educational Level	Participation	Employment	Weekly Wages	Annual Earnings	Participation	Employment	Weekly Wages	Annual Earnings
High School Dropouts								
White males	-0.37	none	-1.49	-2.13	-0.23	-0.22	none	none
Black males	-0.37-	none	-1.85	none	none	-0.56	none	none
Hispanic males	-0.73	none	-2.19-	-3.61-	none	none	none	none
White females	none	none	-2.08	-2.52	-0.43	none	0.93	none
Black females	none	none	-4.97	-5.94	-0.31	none	-1.08-	-1.72
Hispanic females	none	-0.77	-5.39	-6.92	-0.58	none	none	none
High School Graduates								
White males	none	none	-0.65	-0.64-	-0.20	-0.11-	none	-0.51-
Black males	-0.60	none	-2.28-	-2.60	none	-0.57	none	none
Hispanic males	none	none	-2.27-	-3.74-	-0.53	none	none	none
White females	0.50	none	-0.55-	-0.52-	-0.25	-0.11	none	none
Black females	-0.83	none	-2.82	-3.46	none	-0.34	0.81	none
Hispanic females	none	none	-1.91-	-2.38-	none	none	none	none

Table D.1—continued

Group and Educational Level	1970s Participation	1970s Employment	1970s Weekly Wages	1970s Annual Earnings	1980s Participation	1980s Employment	1980s Weekly Wages	1980s Annual Earnings
More Than High School Degree								
White males	none	none	–0.97	–0.92	none	none	none	none
Black males	—	—	—	—	–0.02	none	none	none
White females	none	none	–0.79-	none	–0.26	none	0.35-	none
Black females	—	—	—	—	none	none	none	none

NOTES: - indicates that the effect is not statistically significant in the baseline regression at the 0.10 level but that there is evidence that the effect is important; each case is discussed in detail in Schoeni, McCarthy, and Vernez (1997). The effects for weekly wages and annual earnings are the estimated percentage changes in those outcomes, and the effects for participation and employment are the estimated percentage point changes in the percentage who are participating in the labor force or who are employed, respectively. — means that there were too few observations available to make an estimate.

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Lessons from California's Thirty-Year Immigration Experiment

> "Immigration should not be viewed as inherently 'good' or 'bad'; rather, the effects of immigration are likely to vary depending upon its volume, the characteristics of the immigrants, and the economic and social condition of the environment."
>
> —Kevin F. McCarthy, Georges Vernez, *Immigration in a Changing Economy*

International immigration to California has steadily increased over the past thirty years and has profoundly affected the state's population and economy. Some observers of these changes are seeing the extreme diversity of California's population as the harbinger of where the nation is headed in the long term. For others, California has become the symbol of a major backlash against immigrants and immigration.

How has California benefitted from immigration? What impact have immigrants had on the state's job market? How have they affected the demand for federal and state services? What has been their educational and economic progress since their arrival?

This book is the culmination of a comprehensive study of how immigration has changed over the past three decades. It assesses the impact immigration has had on the state's demography, economy, people, and institutions, with lessons to be drawn for other states, the nation, and even other countries

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